

**Stable isotope data ($\delta^{15}\text{N}$, $\delta^{13}\text{C}$) for marine fishes and
invertebrates from the Beaufort Regional Environmental
Assessment Marine Fishes Project, August-September
2012 and 2013**

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STABLE ISOTOPE DATA ($\delta^{15}\text{N}$, $\delta^{13}\text{C}$) FOR MARINE FISHES AND INVERTEBRATES
FROM THE BEAUFORT REGIONAL ENVIRONMENTAL ASSESSMENT MARINE
FISHES PROJECT, AUGUST-SEPTEMBER 2012 AND 2013

by

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ABSTRACT

Stasko, A., Swanson, H., Atchison, S., MacPhee, S., Majewski, A., de Montety, L., Archambault, P., Walkusz, W., Reist, J., and Power, M. 2017. Stable isotope data ($\delta^{15}\text{N}$, $\delta^{13}\text{C}$) for marine fishes and invertebrates from the Beaufort Regional Environmental Assessment Marine Fishes Project, August-September 2012 and 2013. Can. Data Rep. Fish. Aquat. Sci. 1270: vi + 63 p.

This report presents stable isotope data ($\delta^{15}\text{N}$, $\delta^{13}\text{C}$ and C:N ratios) for marine fishes, benthic invertebrates, zooplankton and sediments collected as part of the Beaufort Regional Environmental Assessment Marine Fishes Project. Sampling was conducted along 12 transects in the Canadian Beaufort Sea and Amundsen Gulf during the open water seasons of 2012 and 2013. A total of 113 taxa were selected for stable isotope analyses. The $\delta^{15}\text{N}$, $\delta^{13}\text{C}$ and C:N values for all taxa are reported as means for the entire study region, as well as means for four water mass assemblages that differ in vertical water mass profile, nested within three large-scale regions that differ in organic matter input regimes. These data provide key information to infer food web structure and feeding linkages among offshore marine fishes and invertebrates, thus may be used as a baseline for future monitoring and regulatory decision-making.

RÉSUMÉ

Stasko, A., Swanson, H., Atchison, S., MacPhee, S., Majewski, A., de Montety, L., Archambault, P., Walkusz, W., Reist, J., and Power, M. 2017. Stable isotope data ($\delta^{15}\text{N}$, $\delta^{13}\text{C}$) for marine fishes and invertebrates from the Beaufort Regional Environmental Assessment Marine Fishes Project, August-September 2012 and 2013. Can. Data Rep. Fish. Aquat. Sci. 1270: vi + 63 p.

Ce rapport présente des données sur les isotopes stables ($\delta^{15}\text{N}$, $\delta^{13}\text{C}$ et ratios C:N) chez les poissons marins, les invertébrés benthiques, le zooplancton et les sédiments qui ont été recueillies dans le cadre du projet Poissons marins de l'évaluation environnementale de la région de Beaufort. L'échantillonnage a été effectué le long de 12 transects dans la partie canadienne de la mer de Beaufort et du golfe Amundsen pendant la saison des eaux libres en 2012 et en 2013. Un total de 113 taxons ont été sélectionnés aux fins de l'analyse des isotopes stables. Les valeurs de $\delta^{15}\text{N}$, de $\delta^{13}\text{C}$ et de C:N pour tous les taxons sont déclarées en tant que moyennes pour l'ensemble de la région visée par l'étude, de même que pour quatre assemblages de masses d'eau au profil vertical différent, situées dans trois grandes régions qui présentent divers régimes d'apport en matières organiques. Ces données fournissent des renseignements clés pour déduire la structure du réseau trophique et les liens alimentaires entre les poissons et les invertébrés marins au large des côtes, et peuvent donc servir de fondement pour la surveillance et la prise de décisions réglementaires à l'avenir.

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INTRODUCTION

The Beaufort Regional Environmental Assessment Marine Fishes Project (BREA-MFP) was a multi-stakeholder research initiative that aimed to fill knowledge gaps regarding offshore marine fishes and their habitats in the Canadian Beaufort Sea (CBS). Prior to the BREA-MFP, knowledge of the diversity, distributions, and food web structure of marine fish and invertebrate communities in the CBS was largely limited to coastal environments (< 150 m deep) and the Mackenzie River Delta (see review in Majewski et al. 2016a). Recent gas and oil interest in the deep, offshore CBS has heightened the need for environmental baseline information. Such information is needed to support an ecosystem-based management approach to making regulatory decisions, monitoring the impacts of hydrocarbon development and climate change, and conserving ecosystems that are important to traditional Inuvialuit practices. Although a primary objective of the BREA-MFP was to gather information regarding fishes, it also aimed to establish habitat associations and functional relationships between fish and marine invertebrates. The BREA-MFP supported sampling and research related to primary production, oceanography, species inventories, habitat associations, contaminants, and food web structure to depths up to 1000 m.

This report presents the stable isotope data for bulk sediments and 113 fish and invertebrate taxa analysed as part of the food web component of the BREA-MFP. Stable isotope ratios of nitrogen ($\delta^{15}\text{N}$) can be used to infer the relative position of a consumer in the food chain, whereas those of carbon ($\delta^{13}\text{C}$) can be used to infer the dietary carbon sources utilized by consumers (e.g., DeNiro and Epstein 1981, Peterson and Fry 1987). Together, $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ provide key information about feeding relationships, such as important prey items, relative food web positions, and diet overlap among consumers within a community (e.g., Cabana and Rasmussen 1996, Phillips 2001, Bearhop et al. 2004, Layman et al. 2007). The data presented here can thus be used to determine food web linkages among offshore and nearshore biota, as well as to understand how food web relationships or feeding patterns may change along major environmental gradients.

METHODS

STUDY AREA

Sampling took place in 2012 and 2013 in the southern CBS and Amundsen Gulf, geographically focused from approximately 141.08 to 117.86 °W and from 69.35 to 71.87 °N (Fig. 1). This region is characterized by high spatial heterogeneity in habitat and primary production associated with varying influences of water mass properties and organic matter inputs (e.g., Morata et al. 2008, Sallont et al. 2011, Ardyna et al. 2013). Three major water sources influence the oceanography of the region, including Pacific-origin waters that enter from the Chukchi Sea, riverine inputs of fresh water, and Atlantic-origin waters that enter the Beaufort Sea from the

west after circulating counter-clockwise around the Arctic. The relatively narrow Mackenzie Shelf extends approximately 120 km offshore to about the 200 m isobath, past which the seafloor descends quickly to several thousand metres in the Canada Basin (Jakobsson et al. 2003). The shelf is much narrower in the semi-enclosed Amundsen Gulf and maximum depths are only about 500 m (Jakobsson et al. 2003). Along the steep slope, a stacked, vertical water mass structure is established by strong salinity-driven stratification between water masses that differ in origin, salinity, temperature, and nutrient content (McLaughlin et al. 1996, 2004). The vertical structure can be simplified into four major layers, which are described in McLaughlin et al. (1996, 2004), Lansard et al. (2012), and Hodgson et al. (2015). Briefly, wind mixing of seasonal riverine and ice-melt inputs of fresh water with marine waters creates a low-salinity surface layer that can extend down to ~ 50 m deep, called the Polar Mixed Layer. Below the Polar Mixed Layer, the Pacific Halocline extends to ~ 200 m, forming a cold, complex layer of nutrient-rich Pacific-origin water with varying salinity. The Pacific Halocline transitions into the warmer, saltier Atlantic Layer across a broad thermohalocline around 200 – 350 m. Arctic Deep Water forms the deepest layer, which begins around 750 – 800 m and extends to the seafloor.

Longitudinal patterns of primary production in the Beaufort Sea and Amundsen Gulf region vary inter-annually, but generally establish a high-low-high gradient from west to east (Carmack et al. 2004, Morata et al. 2008, Ardyna et al. 2013). Primary production is relatively higher in the Alaskan Beaufort Sea which is more strongly influenced by nutrient-rich Pacific-origin waters (Ardyna et al. 2013). Substantial fresh water and sediment loads from the Mackenzie River dampen primary production on the Mackenzie Shelf (Carmack et al. 2004). The Mackenzie River plume discharges more than 330 km³ of fresh water and 130 x 10⁶ t of sediment annually, exceeding the sediment input of any other Arctic river (Macdonald et al. 1998, Doxaran et al. 2015). The plume is usually displaced eastwards by the Coriolis Effect such that the shelf and slope communities east of the Mackenzie River receive substantial deposits of terrestrially-derived organic matter. Terrestrial organic matter dominates marine sediments as far east as the eastern tip of the Tuktoyuktuk Peninsula and as far downslope as 1000 m (Magen et al. 2010). Wind- and bathymetry-driven upwellings along the shelf-break, especially near the Mackenzie and Kugmallit submarine troughs and at Cape Bathurst, occasionally replenish nutrients in the upper water column and cause pulsed primary production events during the summer (Carmack and Chapman 2003, Williams and Carmack 2008, Tremblay et al. 2011). The Amundsen Gulf is characterized by high primary production, especially near Cape Bathurst where there is frequent upwelling and polynya formation during winter (Williams and Carmack 2008, Ardyna et al. 2013). However, 70 to 95 % of the particulate organic carbon produced in the pelagic realm is consumed by the pelagic community, resulting in limited availability of fresh organic carbon at the seafloor to feed benthic communities (Forest et al. 2010, Sampei et al. 2011). Darnis et al. (2012) pointed out that high primary production, low benthic activity and low sediment pigment concentrations in the central Amundsen Gulf (Forest et al. 2010) are in contrast to high primary

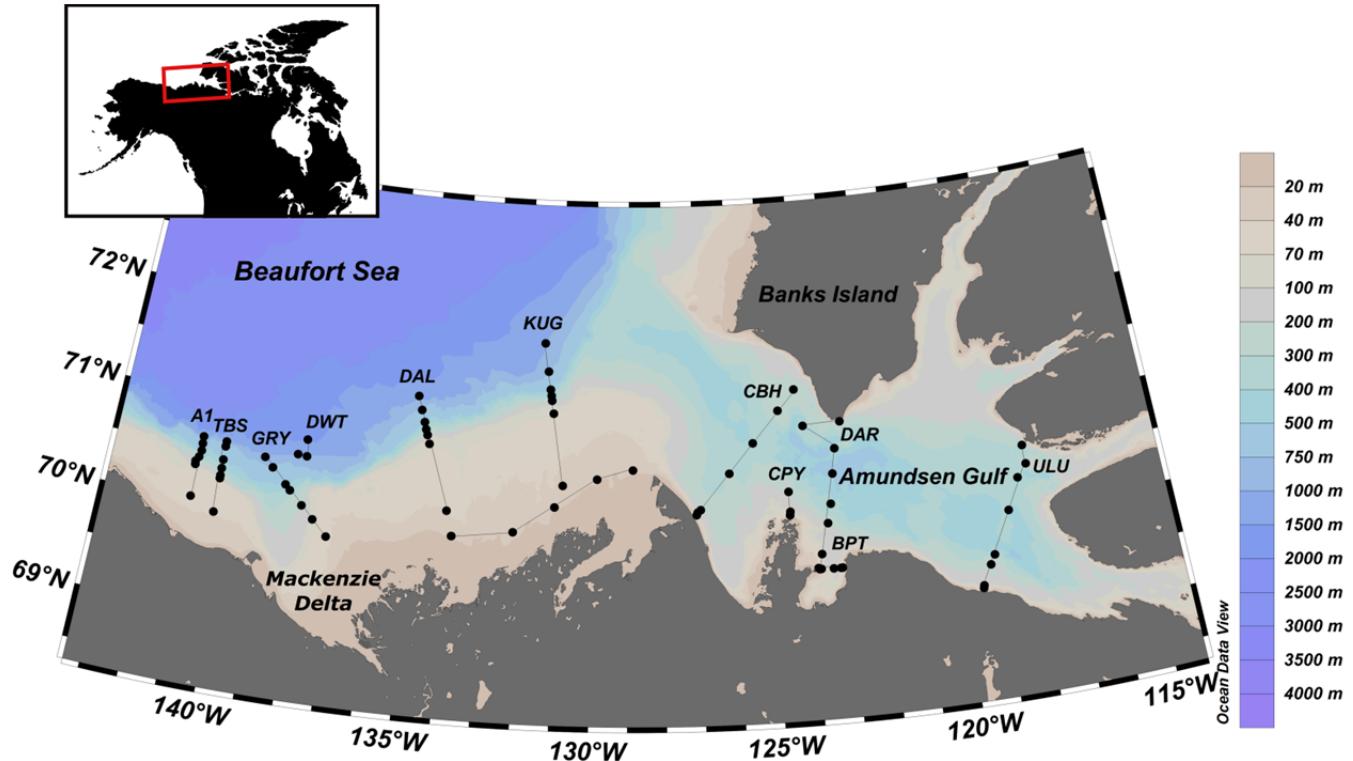


Figure 1. Sampling transects and stations for which stable isotope data were collected by the BREA-MFP in 2012 and 2013. Acronyms are defined in Table 1.

production, high benthic activity and high sediment pigment concentrations on the eastern Mackenzie Shelf, indicating spatial heterogeneity in benthic-pelagic coupling in the CBS is linked to differences in water column processes.

FIELD SAMPLING

Samples were collected aboard the stern trawler FV *Frosti* during the open water season from early August to early September of 2012 and 2013. Samples for stable isotope analysis (SIA) were collected from twelve transects that spanned the continental shelves and associated slopes of the southern CBS and Amundsen Gulf (Fig. 1; Table 1). Each transect had 3 to 8 pre-defined sampling stations that targeted key sampling depths associated with different habitats and water masses.

Five primary food web components were analysed for stable isotopic composition: fish, benthic epifauna, benthic infauna, zooplankton, and marine sediments. The majority of marine fish in the CBS and the majority of those selected for SIA are benthic, living and eating primarily near the seafloor. Epifauna are the larger invertebrates that live on top of or directly above the sediments (e.g., larger molluscs, shrimps and brittle stars). Infauna are invertebrates that live within the

Table 1. Names, abbreviations, depth ranges, and start and end coordinates for transects sampled for stable isotope analysis (SIA) during the BREA-MFP in 2012 and 2013. The biotic components analysed for stable isotopic composition are indicated for each transect.

Year	Transect name	Transect abbreviation	Number of stations	Depth range sampled for SIA (m)	Start coordinates		End coordinates		Components analysed for SIA				
					Latitude	Longitude	Latitude	Longitude	Fish	Benthic epifauna	Benthic infauna	Zooplankton	Sediment
2012													
	Transboundary	tbs	7	25 - 1006	69.930	-140.377	70.602	-140.374	X	X	X	X	X
	Garry	gry	7	40 - 867	69.876	-137.243	70.526	-139.229	X	X	X	X	X
	Kugmallit	kug	7	19 - 1006	70.011	-133.840	71.251	-135.072	X	X	X	X	X
	Dalhousie	dal	7	20 - 1001	70.351	-130.878	71.865	-131.479	X	X	X	X	X
2013													
	Alaskan 1	a1	7	44 - 810	70.038	-141.077	70.606	-141.039	X	X			X
	Transboundary	tbs	7	40 - 893	69.930	-140.377	70.589	-140.425	X	X	X		X
	Deep-water	dwt	3	1140 - 1529	70.599	-138.329	70.746	-138.129	X			X	X
	Garry	gry	7	46 - 1000	69.875	-137.242	70.524	-139.235	X	X			X
	Escape	esc	5	19 - 20	70.694	-128.871	70.011	-133.843				X	X
	Cape Bathurst	cbh	7	38 - 358	70.268	-127.103	71.393	-124.167	X	X	X	X	X
	Cape Parry	cpy	3	42 - 200	70.224	-124.500	70.448	-124.530				X	X
	Bennett Point	bpt	5	20 - 127	69.702	-123.850	69.699	-123.195				X	X
	Darnley Bay	dar	8	20 - 507	69.703	-123.819	71.061	-122.917	X	X	X	X	X
	Ulukhaktok	ulu	8	38 - 451	69.347	-119.514	70.602	-117.855	X	X	X	X	X

sediment (e.g., small polychaetes, nematodes, small clams and mussels). Due to the mesh sizes for sampling equipment (12.7 and 6.3 mm inner liners for trawl nets and 1 mm mesh for sediment sieve; see below), the focus for this study was on large epifauna (> 2 mm) and macro infauna (> 1 mm). Marine sediments were sampled to characterize the relative quality and composition of the bulk organic matter (i.e., nutrients) available to the benthos.

On-board sampling and processing protocols are described in detail by Majewski et al. (2016a). Briefly, fish and epifaunal invertebrates were collected at each station using one or a combination of two trawl nets: (1) a modified Atlantic Western IIA benthic otter trawl (successive mesh sizes of 127 and 114 mm for the wings and belly, respectively, and 102 mm with a 12.7 mm liner in the intermediate and cod end to retain small fish) paired with Thyborøn Type II bottom-tending doors to ensure lateral opening, and (2) a 3 m High-Rise Benthic Beam Trawl (6.3 mm mesh cod end liner). Macrozooplankton were collected using oblique tows of a Bongo net with two side-by-side sampling nets (0.25 m^2 , 500 μm mesh) through the upper 200 m of the water column. In depths less than 200 m, the Bongo net was towed from near bottom to surface. Marine sediments were collected using a 0.5 m^2 USNEL box core. Sediment for SIA was scraped from the top 1 cm of the box core. The top $\sim 20 - 30$ cm of half of the remaining sediment core were sieved through a 1 mm stainless steel mesh to collect infaunal invertebrates.

Biota collected for SIA were identified to the lowest possible taxonomic resolution and rinsed in seawater prior to freezing. Biota and sediments were frozen immediately onboard at -50°C . Where taxonomic doubt existed, voucher specimens were preserved in formalin for later verification by taxonomists. Finer taxonomic sorting of infaunal invertebrates was conducted later in the laboratory. Scientific names were standardized to those currently accepted in the World Register of Marine Species (WoRMS Editorial Board 2016).

STABLE ISOTOPE ANALYSIS

Nine transects were chosen for SIA of fish and benthic invertebrates: a1, tbs, gry, dwt, dal, kug, cbh, dar, and ulu (Table 1). These transects were chosen because of their cross-shelf position, which allowed comparisons among benthic biota at all habitat depths sampled for this study. SIA was conducted on zooplankton from all transects except a1, for which zooplankton samples were not available. SIA was conducted on marine sediments from all sampling stations. Some biota were sampled and analysed from gry and tbs in both 2012 and 2013 to allow inter-annual comparisons.

Representative subsets of fish and benthic invertebrates were chosen for SIA based on ubiquity, relative abundance, taxonomic diversity, and functional diversity based on qualitative assessments in the field, then further refined based on post-field sample inventories. A minimum of 3 individuals per taxon, in each water mass assembly was targeted for analysis ($n = 1$ to 112,

Appendix A). Fish and benthic epifauna were sampled from across the range of available body sizes to capture potential covariation between body size and $\delta^{15}\text{N}$ (e.g., Romanuk et al. 2011). All identifiable zooplankton taxa were included in SIA. Zooplankton were only available as a single bulk sample per taxon per sampling station. The index of taxonomic distinctness based on presence/absence data (Δ^+ ; Clarke and Warwick 1998) was used to evaluate whether the subset of taxa selected for SIA deviated significantly from the taxonomic diversity represented by the entire list of observed species. Taxonomic distinctness calculates the average path length between all pairs of species through a phylogenetic tree, providing an index of biodiversity that is more closely linked to functional diversity than is species richness, and is robust to differences in sampling effort (Clarke and Warwick 1998).

Various slow-turnover tissues were dissected from biota for SIA based on information in the literature and dissection constraints for invertebrates (e.g., McTigue and Dunton 2014; see tissue selections in Appendix A). Where possible, muscle tissue was dissected (e.g., fish, large gastropods, large amphipods) and/or the exoskeleton was removed and only internal viscera was retained for SIA. Smaller organisms that could not be separated from their exoskeleton were analysed whole. Samples were dehydrated in an oven at 50 °C (fish and sediments) or a Labconco FreeZone 18 freeze-drier (epifauna, infauna, and zooplankton). Tissues were then ground to a homogenous powder with mortar and pestle and analysed for N and C isotopic composition using a Delta Plus continuous flow isotope spectrometer (Thermo-Finnigan) coupled to a 4010 Elemental Analyzer (Costech Instruments) at the University of Waterloo Environmental Isotopes Laboratory in Waterloo, Canada. Subsamples of sediment and invertebrates that contained exoskeleton were acidified with 10 % HCl to remove inorganic carbon following the drop-by-drop method described by Jacob et al. (2005). Acidified samples were re-analysed to obtain a $\delta^{13}\text{C}$ value reflective of metabolically active tissues (Søreide et al. 2006). Elemental isotope ratios ($^{15}\text{N} : ^{14}\text{N}$, $^{13}\text{C} : ^{12}\text{C}$) were expressed in standard δ notation as parts per thousand (‰) relative to the international standards Vienna Pee Dee Belemnite for carbon and atmospheric N_2 for nitrogen (Craig 1957, Mariotti 1983). Working laboratory standards included 2 standards of $(\text{NH}_4)_2\text{SO}_4$ for $\delta^{15}\text{N}$ (0.77 and 20.2 ‰) and cellulose for $\delta^{13}\text{C}$ (-25.5 ‰), cross-calibrated to organic materials and the international standard materials mentioned above. Analytical error for $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ did not exceed 0.3 and 0.2 ‰ per run, respectively, based on repeated measurements of laboratory standard material. Laboratory standards comprised no less than 20 % of each run. Repeatability based on all duplicate measurements of sample material was 0.3 ‰ for both $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$.

DECISION REGARDING LIPID EXTRACTION

Lipids were not extracted from tissues prior to analysis. Lipid extraction can significantly change measured $\delta^{13}\text{C}$ values, as lipids are depleted in ^{13}C relative to protein (McConaughey and McRoy 1979). Consequently, lipid extraction has been proposed as a solution to avoid confusion

between isotopic variability from lipids and isotopic variability caused by the resource and/or habitat use patterns of consumers (e.g., Logan et al. 2008). Extraction is unnecessary for fish muscle when C:N < 4, assuming C:N is a good proxy for lipid content (e.g., Jardine et al. 2009). The majority of fish analysed in this study had C:N < 4 and thus lipid content would not significantly alter the isotope values reported here. To assess the potential for lipid to bias the $\delta^{13}\text{C}$ values of invertebrate taxa with C:N > 4, we regressed $\delta^{13}\text{C}$ by C:N for 13 invertebrate taxa that occurred across the sampling region, with minimum $n = 30$ (McTigue and Dunton 2014). C:N did not explain substantial variation in $\delta^{13}\text{C}$ among tested invertebrates ($r^2 < 0.31$), indicating lipid extraction would not have significantly altered the isotopic values reported here. Similar results have been reported for Arctic benthic invertebrates elsewhere (Dunton et al. 2012, McTigue and Dunton 2014). However, we do advise caution when comparing the isotopic values reported here with studies that use lipid-extracted values (Søreide et al. 2006).

HABITAT DIVISIONS

Significant differences in Arctic benthic food web structure have been linked to the spatial patterns of food availability at the seafloor (e.g., Grebmeier et al. 2006, 2015, Iken et al. 2010). Differences in food availability for Arctic benthos may be linked to the magnitude of primary production at the surface, vertical flux rates, hydrographic circulation patterns that deliver organic matter from adjacent marine habitats, or the availability of terrestrially-derived organic matter (e.g., Dunton et al. 2006, Grebmeier et al. 2006, Feder et al. 2007, Iken et al. 2010). In the neighbouring Chukchi Sea, significant differences in benthic community composition and food web structure have been linked to the spatial distribution of nutrient-rich and nutrient-poor water masses (e.g., Feder et al. 2007, Iken et al. 2010). Similarly, significant differences in fish community composition occur among water masses distributed vertically along the CBS slope (Majewski et al. 2016b, 2017). To address the potential effects of environmental heterogeneity in the CBS on stable isotope values (see Study Area), we divided samples into three longitudinal regions based on differences in primary production regime. Sampling stations within the regions were further divided among four groups based on the combination of water masses that comprise the vertical profile at the station location, termed a “water mass assembly”; see Study Area).

The three longitudinal regions were established using previously published primary production estimates (Carmack et al. 2004, Morata et al. 2008, Ardyna et al. 2013): (1) the western CBS included transects immediately west of the Mackenzie River delta on the American Beaufort Shelf (a1, tbs), (2) the central CBS region included transects on the Mackenzie shelf and slope that are regularly influenced by the Mackenzie River plume (gry, dwt, dal, and kug), and (3) the Amundsen Gulf region included transects within the Amundsen Gulf (dar, cbh, and ulu).

Table 2. Water mass assemblages delineated along the Beaufort Sea continental slope. The depth range targeted for sampling and the major water mass abutting the seafloor within each water mass assemblage are indicated. Water mass assemblages were named for their position along the continental slope.

Water Mass Assembly	Depth range targeted for sampling stations (m)	Water mass at seafloor
Nearshore shelf	20 - 40	Polar Mixed Layer
Offshore shelf	75 - 200	Pacific Halocline
Upper slope	275 - 500	Atlantic Layer
Lower slope	750 - 1000	Arctic Deep Water

The four vertical water mass assemblages were based on the set of simplified water mass layers that comprise the vertical water column profile at each station location. Boundary depths between water masses were delineated according to temperature, salinity, and nutrient profiles taken at each sampling station (Eert et al. 2015, Niemi et al. 2015). The water mass assemblages were named for their position along the slope, in accordance with previous BREA-MFP research (Table 2; e.g., Niemi et al. 2015, Stasko et al. 2016, Majewski et al. 2016a, 2017).

RESULTS AND DISCUSSION

A total of 113 taxa were analysed for stable isotopic composition. Taxonomic distinctness based on presence/absence data (Δ^+) did not fall outside of the 95 % confidence limit of the expected value calculated from the entire list of observed species for any regional community. Thus we conclude that the results of the subsamples reported here are representative of the entire fauna. Mean $\delta^{15}\text{N}$, $\delta^{13}\text{C}$, and C:N ratios are presented in Appendix A for all fish, epifauna, infauna, and zooplankton taxa within each regional community and water mass assemblage. SI data for sediment and zooplankton exhibited substantial spatial variability and were sampled from more stations than were fish and benthic invertebrate taxa (Table 1). Consequently, SI data for sediment and zooplankton are additionally presented for each individual sampling station in Appendix B and Appendix C, respectively.

Sediments sampled from the nearshore Amundsen Gulf in 2013 had lower $\delta^{15}\text{N}$, lower $\delta^{13}\text{C}$, and typically higher C:N ratios compared to those of the CBS (Fig. 2). The high sediment C:N ratios in the Amundsen Gulf were related to low % N content. The ranges of sediment $\delta^{13}\text{C}$ (-26.7 to -3.3 ‰) and C:N (5.3 to 53.5) values observed here were outside of the ranges previously reported for this region (-28 to -24 ‰ previously reported for $\delta^{13}\text{C}$ in the Polar Mixed Layer,

Pacific Halocline and Atlantic Layer; 6.4 to 9.5 previously reported for C:N in the Pacific Halocline and Atlantic Layer; Magen et al. 2010, Roy et al. 2015). We have no reason to suspect the anomalous values are a result of analytical error since samples from the Amundsen Gulf and Beaufort Sea were analysed in random order. Almost all anomalous values were measured from stations in the Nearshore Shelf and Offshore Shelf habitats, from 20 to 208 m depths, except for one deeper station at 357 m in the Upper Slope.

The widespread filter-feeding zooplankton *Calanus hyperboreus*, which may be used as a pelagic baseline indicator, did not exhibit differences from previously reported values for $\delta^{15}\text{N}$, $\delta^{13}\text{C}$, and C:N ratios as did the sediment (Iken et al. 2005; Fig. 3). Since pelagic indicators did not reflect anomalous stable isotope values, it suggests anomalous $\delta^{13}\text{C}$ and C:N values measured in bulk sediments were likely the result of a past event that left a longer-term signal in the sediment. Although we do not have data to confirm such an event, we could speculate that recent sedimentation and/or downwelling may have been responsible for the anomalous sedimentary $\delta^{13}\text{C}$ and C:N in the nearshore Amundsen Gulf. A high pressure weather system influenced the southern CBS and Amundsen Gulf from January to March, 2013, producing warm temperatures and southwest winds that enhanced the clockwise Beaufort Gyre and produced a large regional ice fracturing event that extended eastwards to Cape Bathurst (National Snow and Ice Data Centre 2013). Reduced ice cover in the region may have allowed the strong winds to influence circulation, and favour upwelling in the vicinity of Cape Bathurst (Williams and Carmack 2008). Such changes in circulation may have enhanced pelagic and/or sympagic primary production by delivering nutrient-rich Pacific water to the shelf (Williams and Carmack 2008). Higher primary production is associated with higher downward export of pelagic organic matter in the CBS and Amundsen Gulf (Sallan et al. 2011). It is thus possible that anomalous $\delta^{13}\text{C}$ and C:N values in bulk sediments were influenced by the downward export of sympagic and pelagic organic matter, or else by material that was transported from sources not directly attributable to local production sources (e.g., ice rafted material, coastal erosion). Even so, the most extreme sedimentary $\delta^{13}\text{C}$ and C:N values measured in this study fall outside of the normal scales measured in terrestrial, sympagic, and pelagic organic matter (e.g., Magen et al. 2010, Roy et al. 2015). As stated earlier, a link between anomalous sedimentary $\delta^{13}\text{C}$ and C:N values and physical forcing events in 2013 is speculative only.

Among all biota sampled, $\delta^{15}\text{N}$ spanned 18.34 ‰ (from 1.73 ‰ for *Thyasira* sp. to 20.07 for a *Lycodes rossi* individual). Fish occupied some of the highest trophic positions, with $\delta^{15}\text{N}$ that ranged from 9.68 to 20.07 ‰ (Fig. 4a). Some epifauna also occupied high trophic positions, with a similar trophic range as fish ($\delta^{15}\text{N}$ from 7.31 to 20.05 ‰; Fig. 5a). Some deposit and suspension-feeding infauna occupied the lowest trophic positions, whereas other carnivorous infauna occupied trophic levels similar to those of some fish and predatory epifauna (e.g., $\delta^{15}\text{N}$ from 14.16 to 16.78 for the predatory marine worms *Aglaophamus* sp. and *Eucranta* sp.). Infauna also exhibited the widest trophic range relative to fish, epifauna, and zooplankton ($\delta^{15}\text{N}$

from 1.73 to 17.39 ‰; Fig. 6a). Zooplankton occupied low to intermediate trophic levels, and exhibited the narrowest trophic range ($\delta^{15}\text{N}$ from 7.31 to 14.37; Fig. 7a).

Among all biota sampled, $\delta^{13}\text{C}$ spanned 19.26 ‰, from -29.15 ‰ for the surface deposit-feeding polychaete taxon Ampharetidae to -9.89 ‰ for the facultative surface deposit or suspension feeding brittle star *Ophiopleura borealis*. Fish occupied a relatively narrow dietary carbon range, with $\delta^{13}\text{C}$ values from -26.65 to -18.43 ‰ (Fig. 4b). Epifauna spanned the widest range of dietary carbon sources, including some of the highest $\delta^{13}\text{C}$ values (from -26.81 to -9.89 ‰; Fig. 5b). High $\delta^{13}\text{C}$ values suggest that some epifaunal taxa consume heavily transformed sedimentary organic carbon, bacterial products, or ice algae (e.g., Peterson and Fry 1987, Hobson et al. 1995, Roy et al. 2015). Infauna spanned a similar range of $\delta^{13}\text{C}$ values to epifauna, but some taxa exhibited very low $\delta^{13}\text{C}$ indicative of consuming either terrestrially-derived or recently produced phytoplankton-derived organic carbon ($\delta^{13}\text{C}$ from -29.15 to -13.36 ‰; Fig. 6b; e.g., Hobson et al. 1995, Dunton et al. 2006, Roy et al. 2015). Zooplankton exhibited the narrowest range of $\delta^{13}\text{C}$ values relative to fish, epifauna, and infauna (-28.54 to -21.78 ‰; Fig. 7b). The low zooplankton $\delta^{13}\text{C}$ values reflect their pelagic diet (e.g., Hobson et al. 1995, Roy et al. 2015).

Raw stable isotope data for individual organisms will be available as open access on the Polar Data Catalogue (www.polardata.ca). By request, additional metadata such as locations of sampling stations and quality assurance/quality control for SIA may be obtained from the BREA-MFP database.

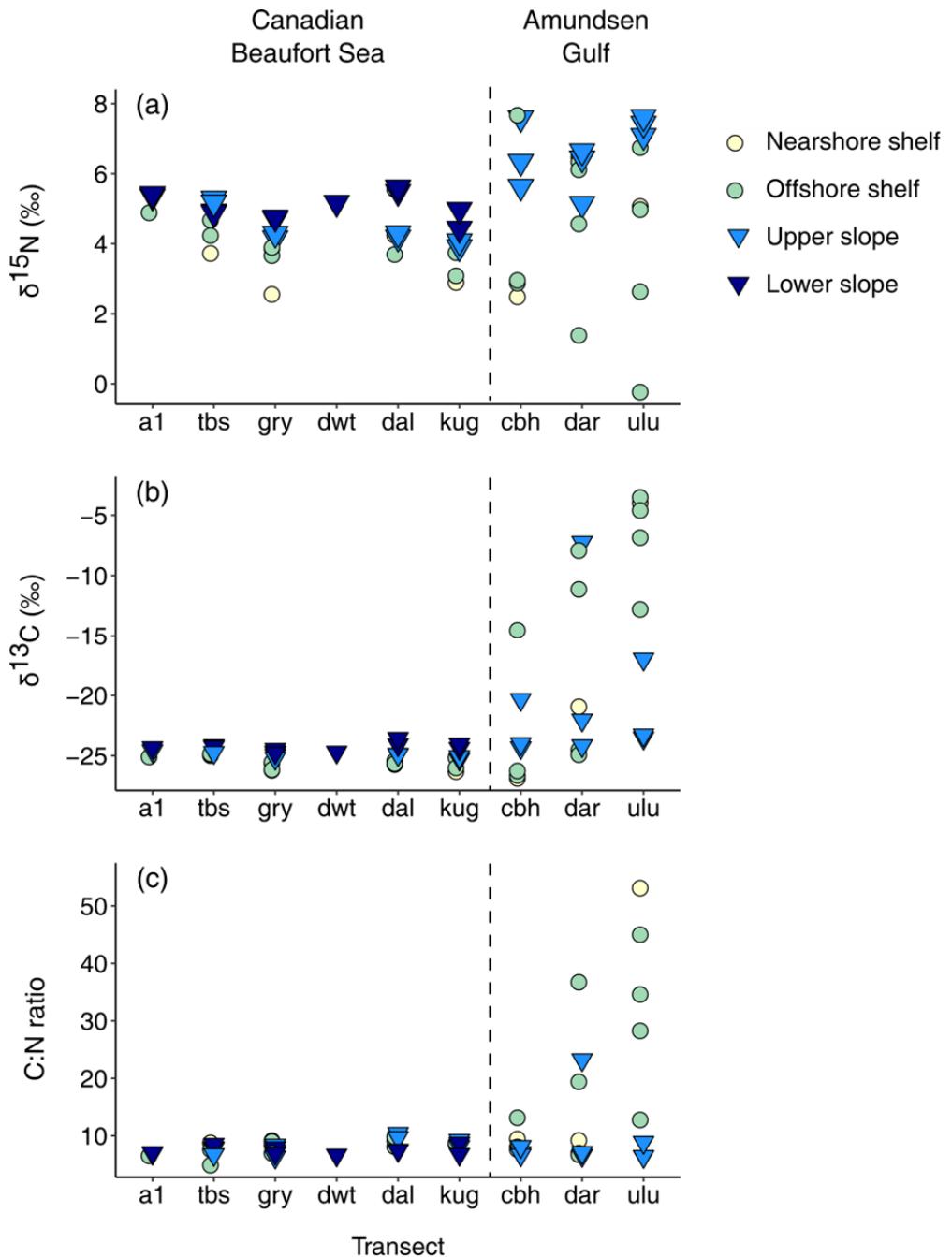


Figure 2. The (a) $\delta^{15}\text{N}$, (b) $\delta^{13}\text{C}$, and (c) C:N values for bulk sediments sampled during the BREA-MFP. Transects are arranged from west to east. Each point represents an individual station along a transect, coloured according to the water mass assemblage in which they occur.

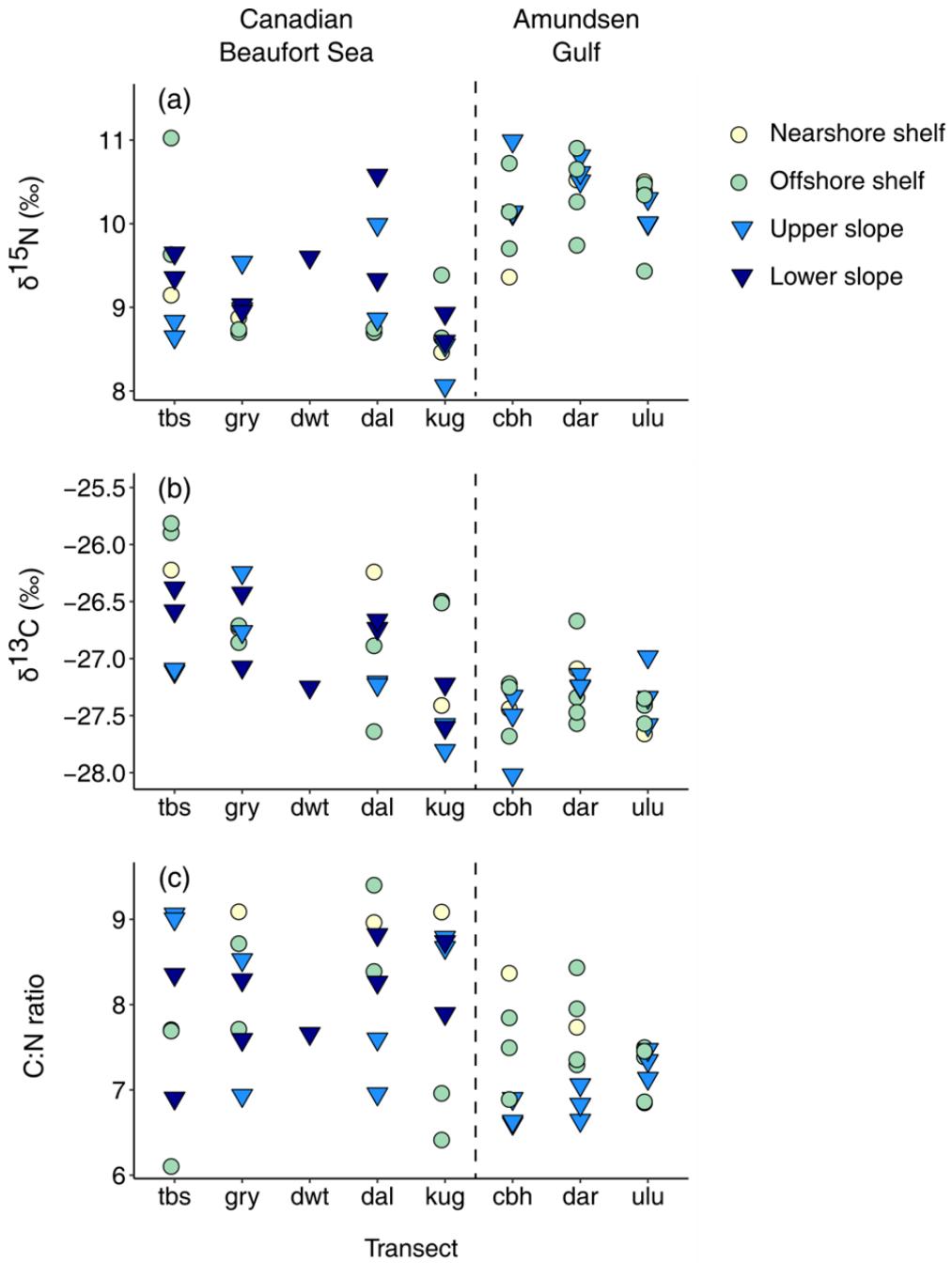


Figure 3. The (a) $\delta^{15}\text{N}$, (b) $\delta^{13}\text{C}$, and (c) C:N values for the filter-feeding zooplankter *Calanus hyperboreus* sampled during the BREA-MFP. Transects are arranged from west to east. Each point represents a bulk sample taken at each station along a transect, coloured according to the water mass assemblage in which they occur.

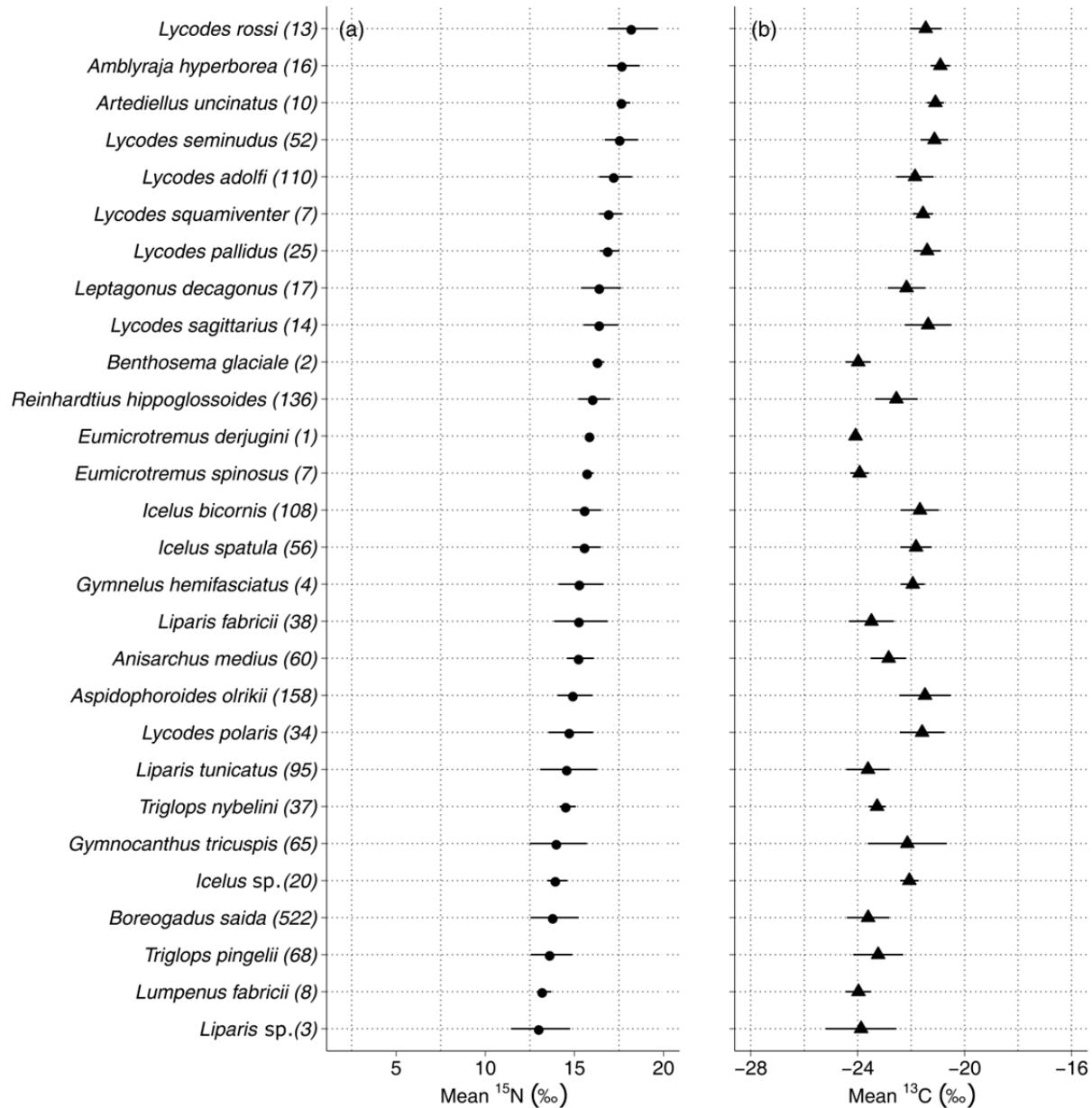


Figure 4. Mean (•) and standard deviation (—) of (a) $\delta^{15}\text{N}$ and (b) $\delta^{13}\text{C}$ for fishes sampled during the BREA-MFP. Taxa are sorted from highest to lowest $\delta^{15}\text{N}$, indicating the approximate relative trophic order among fishes. Numbers in parentheses indicate the number of individual samples analysed.

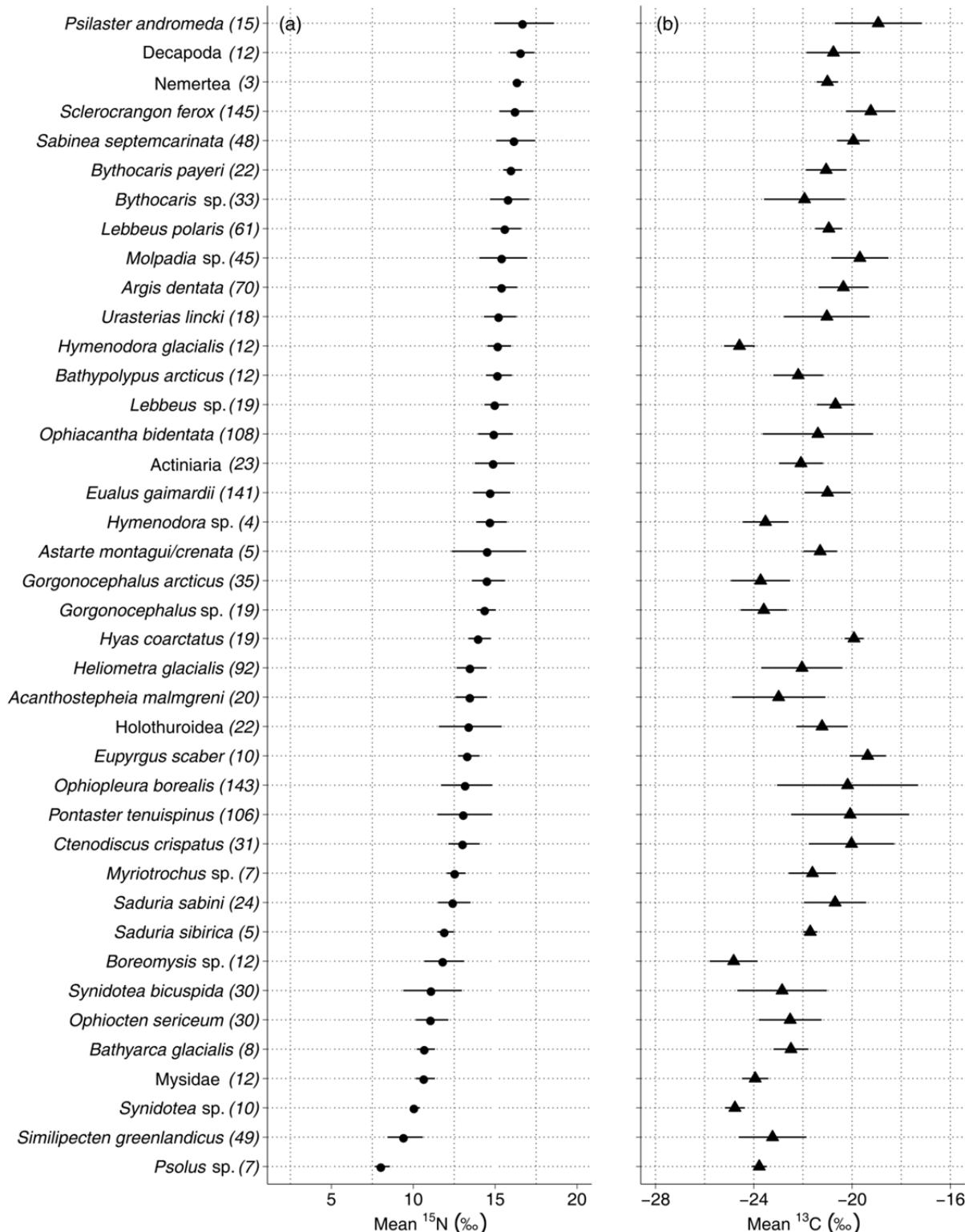


Figure 5. Mean (•) and standard deviation (—) of (a) $\delta^{15}\text{N}$ and (b) $\delta^{13}\text{C}$ for epifaunal invertebrates sampled during the BREA-MFP. Taxa are sorted from highest to lowest $\delta^{15}\text{N}$, indicating the approximate relative trophic order among epifauna. Numbers in parentheses indicate the number of samples analysed.

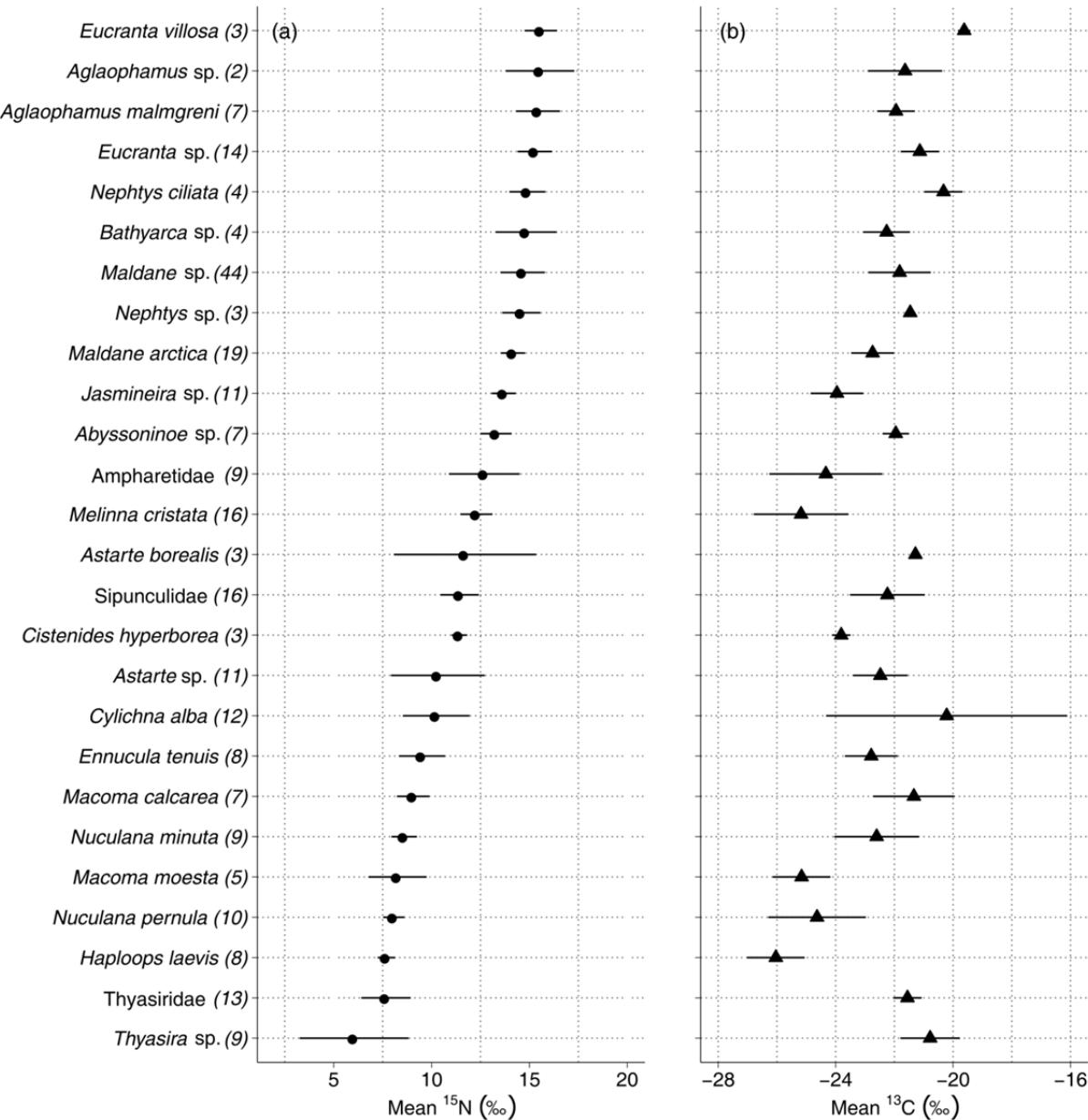


Figure 6. Mean (•) and standard deviation (—) of (a) $\delta^{15}\text{N}$ and (b) $\delta^{13}\text{C}$ for infaunal invertebrates sampled during the BREA-MFP. Taxa are sorted from highest to lowest $\delta^{15}\text{N}$, indicating the approximate relative trophic order among infauna. Numbers in parentheses indicate the number of samples analysed, most of which were bulk.

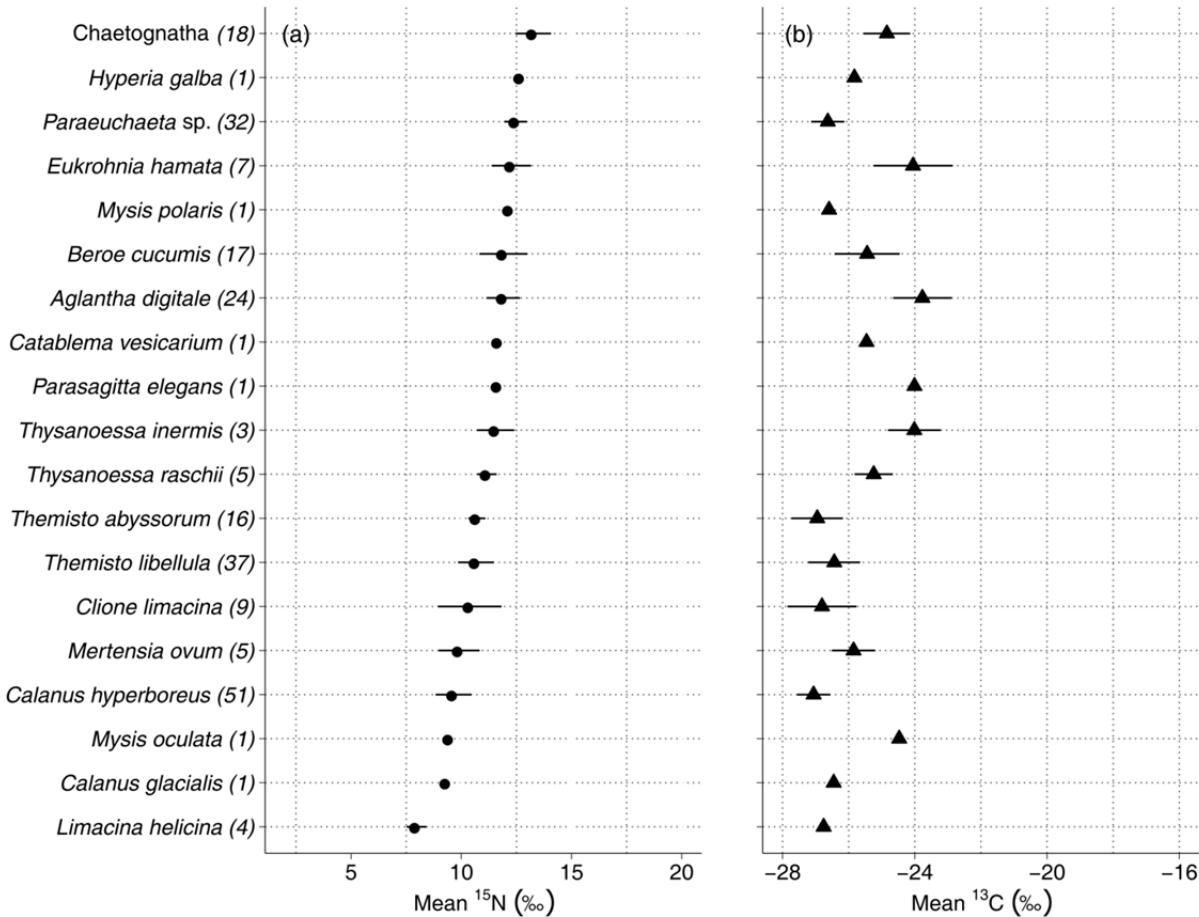


Figure 7. Mean (\bullet) and standard deviation ($-$) of (a) $\delta^{15}\text{N}$ and (b) $\delta^{13}\text{C}$ for zooplankton sampled during the BREA-MFP. Taxa are sorted from highest to lowest $\delta^{15}\text{N}$, indicating the approximate relative trophic order among zooplankton. Numbers in parentheses indicate the number of bulk samples analysed.

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APPENDIX A. The $\delta^{15}\text{N}$, $\delta^{13}\text{C}$ and C:N ratios (mean \pm standard deviation) for marine fish and invertebrates sampled during the BREA-MFP in 2012 and 2013. The tissue type and number of samples (n) processed are also indicated. Trophic functional groups and general food web components for each taxon are listed as a reference to readers regarding the general role that each taxon plays within the food web. Sampling transects in the Canadian Beaufort Sea (CBS) were delineated into three large-scale regions that differ in primary productivity regime and terrestrial influence (Region). Sampling sites within each region were divided among four primary water mass assemblages, delineated using salinity and temperature profiles and named for position along the continental shelf and slope (see Habitat Divisions in main report). Taxa from each region and water mass assembly are listed in alphabetical order of Phylum, then in alphabetical order of taxa within each Phylum. Stable isotope values are listed individually for each year when a taxon from the same region and water mass assembly combination was sampled in both 2012 and 2013 to allow inter-annual comparisons. Stable isotope values are also listed individually when more than one type of tissue was analysed for a given taxon.

Abbreviations for functional groups are:

SF = suspension feeder

SDF = surface deposit feeder

SDF/SF = facultative surface deposit or suspension feeder

SSDF = subsurface deposit feeder

SS carnivore = subsurface carnivore

B-p carnivore = benthopelagic carnivore

Abbreviations for tissue type are:

d.m. = muscle

t.m. = tail muscle

c.m. = claw muscle

i.v. = internal viscera

w.b. = whole body

a.r. = whole body, but with appendages removed

p.b. = part of body; whole individual organisms not available, usually a bulk sample of parts that likely derived from several organisms

visc. = part of main viscera

Region	Water mass	Assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
AMUNDSEN GULF												
NEARSHORE SHELF												
		Sediment			Sediment		2013		3	4.74 ± 2.02	-17.08 ± 11.88	24.32 ± 25.27
		Annelida										
		<i>Maldane</i> sp.		Benthic SSDF	Infauna		2013	w.b.	1	14.29	-21.87	4.80
		<i>Nephtys ciliata</i>		Benthic SS Carnivore	Infauna		2013	w.b.	2	15.27 ± 0.40	-19.82 ± 0.49	4.22 ± 0.44
		Arthropoda										
		<i>Argis dentata</i>		B-p Carnivore	Epifauna		2013	t.m.	1	14.27	-20.98	3.35
		<i>Calanus hyperboreus</i>		Pelagic Herbivore	Zooplankton		2013	w.b.	3	10.16 ± 0.66	-27.38 ± 0.29	7.68 ± 0.76
		<i>Eualus gaimardii</i>		B-p Carnivore	Epifauna		2013	t.m.	8	13.37 ± 0.80	-20.99 ± 0.67	3.49 ± 0.10
		<i>Haploops laevis</i>		Benthic SF	Infauna		2013	w.b.	5	7.58 ± 0.32	-25.39 ± 0.37	6.16 ± 2.53
		<i>Hyas coarctatus</i>		Benthic Carnivore	Epifauna		2013	c.m.	19	14.06 ± 0.68	-19.92 ± 0.38	3.42 ± 0.13
		<i>Sabinea septemcarinata</i>		Benthic Carnivore	Epifauna		2013	t.m.	5	15.61 ± 0.52	-18.78 ± 0.60	3.35 ± 0.03
		<i>Saduria sabini</i>		Benthic Carnivore	Epifauna		2013	w.b.	10	12.41 ± 0.57	-20.04 ± 1.48	3.60 ± 0.61
		<i>Synidotea bicuspidata</i>		Benthic SDF	Epifauna		2013	w.b.	5	11.04 ± 0.60	-23.77 ± 0.19	3.18 ± 0.53
		<i>Themisto libellula</i>		Pelagic Carnivore	Zooplankton		2013	w.b.	2	10.69 ± 0.64	-26.64 ± 0.71	5.96 ± 0.04
		Chordata										
		<i>Anisarchus medius</i>		Benthic Carnivore	Fish		2013	d.m.	3	15.67 ± 0.75	-21.29 ± 1.11	3.52 ± 0.30
		<i>Aspidophoroides olrikii</i>		Benthic Carnivore	Fish		2013	d.m.	22	14.26 ± 0.89	-21.10 ± 1.18	3.38 ± 0.10
		<i>Boreogadus saida</i>		Pelagic Carnivore	Fish		2013	d.m.	9	13.53 ± 1.24	-23.96 ± 0.64	3.45 ± 0.10
		<i>Eumicrotremus spinosus</i>		B-p Carnivore	Fish		2013	d.m.	3	15.68 ± 0.09	-23.66 ± 0.32	3.55 ± 0.15
		<i>Gymnophanths tricuspidis</i>		Benthic Carnivore	Fish		2013	d.m.	5	14.50 ± 0.42	-20.62 ± 1.43	3.23 ± 0.07
		<i>Icelus bicornis</i>		Benthic Carnivore	Fish		2013	d.m.	2	14.18 ± 0.16	-20.66 ± 1.67	3.39 ± 0.08
		<i>Icelus spatula</i>		B-p Carnivore	Fish		2013	d.m.	2	14.93 ± 1.05	-21.21 ± 1.13	3.34 ± 0.17
		<i>Lycodes polaris</i>		Benthic Carnivore	Fish		2013	d.m.	1	16.38	-19.20	3.15
		<i>Triglops pingelii</i>		B-p Carnivore	Fish		2013	d.m.	6	14.77 ± 0.72	-21.41 ± 0.48	3.26 ± 0.04

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
		Cnidaria									
			<i>Aglantha digitale</i>	Pelagic Carnivore	Zooplankton	2013	w.b.	1	10.88	-25.25	3.67
		Echinodermata									
			<i>Ophiocten sericeum</i>	Benthic SDF/SF	Epifauna	2013	w.b.	2	10.84 ± 0.01	-23.04 ± 0.21	3.12 ± 0.35
		Mollusca									
			<i>Astarte borealis</i>	Benthic SF	Infauna	2013	i.v.	3	11.71 ± 3.63	-21.28 ± 0.13	3.98 ± 0.19
			<i>Ennucula tenuis</i>	Benthic SDF	Infauna	2013	i.v.	3	9.90 ± 0.52	-22.82 ± 0.32	4.96 ± 0.05
			<i>Limacina helicina</i>	Pelagic Herbivore	Zooplankton	2013	w.b.	1	8.12	-26.88	3.83
			<i>Macoma calcarea</i>	Benthic SDF/SF	Infauna	2013	i.v.	5	9.47 ± 0.48	-21.65 ± 1.50	4.99 ± 0.76
	OFFSHORE SHELF										
		Sediment			Sediment	2013		11	4.25 ± 2.47	-14.69 ± 9.10	20.33 ± 13.89
		Annelida									
			<i>Abyssoninoe</i> sp.	Benthic SS Carnivore	Infauna	2013	w.b.	2	12.86 ± 1.24	-21.73 ± 0.05	4.37 ± 0.02
			<i>Ampharetidae</i>	Benthic SDF	Infauna	2013	w.b.	1	10.28	-22.96	10.41
			<i>Cistenides hyperborea</i>	Benthic SSDF	Infauna	2013	w.b.	1	11.84	-23.68	5.90
			<i>Eucranta</i> sp.	Benthic Carnivore	Infauna	2013	w.b.	6	15.40 ± 0.92	-20.98 ± 0.69	3.57 ± 0.10
			<i>Eucranta villosa</i>	Benthic Carnivore	Infauna	2013	w.b.	1	16.38	-19.67	3.36
			<i>Jasmineira</i> sp.	Benthic SDF/SF	Infauna	2013	w.b.	1	14.50	-24.80	6.22
			<i>Maldane</i> sp.	Benthic SSDF	Infauna	2013	w.b.	8	13.89 ± 0.90	-21.51 ± 1.35	4.67 ± 0.80
			<i>Nephtys ciliata</i>	Benthic SS Carnivore	Infauna	2013	w.b.	1	15.48	-20.86	4.15
		Arthropoda									
			<i>Argis dentata</i>	B-p Carnivore	Epifauna	2013	t.m.	20	16.3 ± 0.90	-19.44 ± 0.61	3.24 ± 0.10
			<i>Calanus hyperboreus</i>	Pelagic Herbivore	Zooplankton	2013	w.b.	11	10.28 ± 0.46	-27.34 ± 0.27	7.52 ± 0.45
			<i>Eualus gaimardii</i>	B-p Carnivore	Epifauna	2013	t.m.	21	15.30 ± 0.65	-21.25 ± 0.55	3.40 ± 0.11
			<i>Lebbeus polaris</i>	B-p Carnivore	Epifauna	2013	t.m.	20	15.37 ± 0.92	-21.10 ± 0.46	3.44 ± 0.10
			<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	Zooplankton	2013	w.b.	5	12.75 ± 0.59	-26.46 ± 0.25	6.80 ± 0.27

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
Mediterranean Sea	Copepoda		<i>Sabinea septemcarinata</i>	Benthic Carnivore	Epifauna	2013	t.m.	8	17.06 ± 0.69	-19.91 ± 0.34	3.32 ± 0.10
			<i>Saduria sabini</i>	Benthic Carnivore	Epifauna	2013	w.b.	5	13.97 ± 0.39	-20.54 ± 0.51	4.39 ± 1.75
			<i>Sclerocrangon ferox</i>	Benthic Carnivore	Epifauna	2013	t.m.	25	16.79 ± 0.71	-18.76 ± 0.73	3.26 ± 0.16
			<i>Synidotea bicuspidata</i>	Benthic SDF	Epifauna	2013	w.b.	13	12.63 ± 1.10	-21.19 ± 1.44	3.46 ± 0.56
			<i>Themisto libellula</i>	Pelagic Carnivore	Zooplankton	2013	w.b.	9	11.12 ± 0.73	-26.05 ± 0.75	5.72 ± 0.84
	Chaetognatha										
			Chaetognatha	Pelagic Carnivore	Zooplankton	2013	w.b.	9	13.64 ± 0.71	-24.72 ± 0.80	4.44 ± 0.36
	Chordata										
			<i>Anisarchus medius</i>	Benthic Carnivore	Fish	2013	d.m.	4	15.47 ± 0.42	-21.79 ± 0.17	3.59 ± 0.17
			<i>Artemiellus uncinatus</i>	Benthic Carnivore	Fish	2013	d.m.	3	17.60 ± 0.27	-21.16 ± 0.14	3.31 ± 0.04
			<i>Aspidophoroides olrikii</i>	Benthic Carnivore	Fish	2013	d.m.	18	15.37 ± 1.17	-20.95 ± 1.39	3.34 ± 0.14
			<i>Boreogadus saida</i>	B-p Carnivore	Fish	2013	d.m.	54	14.05 ± 1.08	-23.52 ± 0.48	3.30 ± 0.13
			<i>Eumicrotremus derjugini</i>	Benthic Carnivore	Fish	2013	d.m.	1	15.95	-24.08	3.52
			<i>Eumicrotremus spinosus</i>	B-p Carnivore	Fish	2013	d.m.	4	15.92 ± 0.33	-24.12 ± 0.24	3.57 ± 0.08
			<i>Gymnocanthus tricuspis</i>	Benthic Carnivore	Fish	2013	d.m.	11	14.96 ± 0.75	-21.64 ± 1.26	3.19 ± 0.07
			<i>Icelus bicornis</i>	Benthic Carnivore	Fish	2013	d.m.	41	16.42 ± 0.60	-21.19 ± 0.68	3.34 ± 0.14
			<i>Icelus spatula</i>	B-p Carnivore	Fish	2013	d.m.	1	16.12	-22.06	3.49
			<i>Leptagonus decagonus</i>	B-p Carnivore	Fish	2013	d.m.	2	16.09 ± 0.87	-22.20 ± 0.50	3.30 ± 0.22
			<i>Liparis fabricii</i>	Benthic Carnivore	Fish	2013	d.m.	4	14.46 ± 0.70	-23.54 ± 0.79	3.29 ± 0.16
			<i>Lumpenus fabricii</i>	Benthic Carnivore	Fish	2013	d.m.	7	13.29 ± 0.44	-23.94 ± 0.51	4.13 ± 0.42
			<i>Lycodes pallidus</i>	Benthic Carnivore	Fish	2013	d.m.	6	16.95 ± 0.53	-21.07 ± 0.60	3.24 ± 0.16
			<i>Lycodes polaris</i>	Benthic Carnivore	Fish	2013	d.m.	10	15.45 ± 1.02	-21.14 ± 0.46	3.18 ± 0.14
			<i>Triglops nybelini</i>	B-p Carnivore	Fish	2013	d.m.	14	14.28 ± 0.29	-23.43 ± 0.23	3.41 ± 0.11
			<i>Triglops pingelii</i>	B-p Carnivore	Fish	2013	d.m.	8	15.04 ± 0.63	-22.63 ± 0.62	3.32 ± 0.10
Black Sea	Cnidaria										
			Actiniaria	Benthic Carnivore	Epifauna	2013	w.b.	4	15.06 ± 1.32	-21.07 ± 0.44	4.35 ± 0.31
			<i>Aglantha digitale</i>	Pelagic Carnivore	Zooplankton	2013	w.b.	4	12.23 ± 0.50	-24.10 ± 0.34	3.51 ± 0.11

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
Ctenophora											
			<i>Beroe cucumis</i>	Pelagic Carnivore	Zooplankton	2013	w.b.	6	12.15 ± 1.08	-25.42 ± 0.83	4.53 ± 0.44
			<i>Mertensia ovum</i>	Pelagic Carnivore	Zooplankton	2013	w.b.	1	11.34	-26.92	0.00
Echinodermata											
			<i>Ctenodiscus crispatus</i>	Benthic SDF	Epifauna	2013	w.b.	15	13.24 ± 1.11	-19.27 ± 1.95	3.18 ± 1.39
			<i>Gorgonocephalus</i> sp.	Benthic Carnivore	Epifauna	2013	w.b.	9	14.48 ± 0.58	-23.75 ± 1.18	6.36 ± 1.99
			<i>Heliometra glacialis</i>	Benthic SF	Epifauna	2013	w.b.	20	13.73 ± 0.26	-22.08 ± 1.55	3.31 ± 1.06
			<i>Ophiacantha bidentata</i>	Benthic SDF/SF	Epifauna	2013	w.b.	22	15.09 ± 0.71	-22.16 ± 0.82	3.25 ± 0.85
			<i>Ophiocten sericeum</i>	Benthic SDF/SF	Epifauna	2013	w.b.	8	11.13 ± 0.31	-21.76 ± 1.64	4.05 ± 1.22
			<i>Ophioleura borealis</i>	Benthic SDF/SF	Epifauna	2013	w.b.	11	14.62 ± 1.16	-20.09 ± 2.38	4.72 ± 1.75
			<i>Pontaster tenuispinus</i>	Benthic SDF	Epifauna	2013	w.b.	10	14.75 ± 0.55	-19.88 ± 0.65	3.85 ± 0.55
Mollusca											
			<i>Astarte montagui/crenata</i>	Benthic SF	Epifauna	2013	i.v.	1	10.57	-22.30	3.95
			<i>Astarte</i> sp.	Benthic SF	Infauna	2013	i.v.	7	11.05 ± 2.78	-22.64 ± 1.00	4.41 ± 0.38
			<i>Clione limacina</i>	Pelagic Carnivore	Zooplankton	2013	w.b.	3	11.46 ± 0.63	-26.69 ± 0.23	5.83 ± 0.42
			<i>Cylidena alba</i>	Benthic Carnivore	Infauna	2013	i.v.	3	10.21 ± 2.55	-22.61 ± 0.74	4.74 ± 0.53
			<i>Ennucula tenuis</i>	Benthic SDF	Infauna	2013	i.v.	5	9.27 ± 1.45	-22.77 ± 1.16	5.30 ± 1.07
			<i>Macoma calcarea</i>	Benthic SDF/SF	Infauna	2013	i.v.	2	8.03 ± 0.42	-20.56 ± 0.95	4.20 ± 0.42
			<i>Macoma moesta</i>	Benthic SDF/SF	Infauna	2013	w.b.	1	10.20	-23.96	4.70
			<i>Nuculana minuta</i>	Benthic SDF	Infauna	2013	i.v.	9	8.60 ± 0.65	-22.60 ± 1.44	5.57 ± 1.14
			<i>Nuculana pernula</i>	Benthic SDF	Infauna	2013	i.v.	1	8.47	-20.41	5.59
			<i>Similipecten greenlandicus</i>	Benthic SF	Epifauna	2013	i.v.	10	10.76 ± 1.12	-22.91 ± 2.03	3.95 ± 0.58
			<i>Thyasira</i> sp.	Benthic SF	Infauna	2013	i.v.	5	4.36 ± 2.49	-20.76 ± 0.87	2.61 ± 0.75
UPPER SLOPE											
		Sediment			Sediment	2013		9	6.66 ± 0.87	-20.67 ± 5.56	8.92 ± 5.43

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
Annelida											
			<i>Abyssoninoe</i> sp.	Benthic SS Carnivore	Infauna	2013	w.b.	3	13.55 ± 0.69	-21.83 ± 0.52	4.75 ± 0.87
			<i>Aglaophamus malmgreni</i>	Benthic SS Carnivore	Infauna	2013	w.b.	2	15.45 ± 0.29	-21.42 ± 0.17	4.09 ± 0.04
			<i>Aglaophamus</i> sp.	Benthic SS Carnivore	Infauna	2013	w.b.	1	16.78	-20.74	3.91
			Ampharetidae	Benthic SDF	Infauna	2013	w.b.	5	12.83 ± 1.10	-23.96 ± 0.77	6.58 ± 0.89
			<i>Eucranta</i> sp.	Benthic Carnivore	Infauna	2013	w.b.	4	15.75 ± 0.21	-20.95 ± 0.38	3.59 ± 0.09
			<i>Jasmineira</i> sp.	Benthic SDF/SF	Infauna	2013	w.b.	4	13.82 ± 0.19	-24.77 ± 0.51	6.25 ± 1.23
			<i>Maldane</i> sp.	Benthic SSDF	Infauna	2013	w.b.	15	15.76 ± 0.78	-20.96 ± 0.33	4.33 ± 0.31
			<i>Melinna cristata</i>	Benthic SDF	Infauna	2013	w.b.	5	12.83 ± 0.67	-23.13 ± 0.49	6.39 ± 0.76
Arthropoda											
			<i>Calanus hyperboreus</i>	Pelagic Herbivore	Zooplankton	2013	w.b.	9	10.39 ± 0.36	-27.38 ± 0.30	6.96 ± 0.32
			<i>Eualus gaimardi</i>	B-p Carnivore	Epifauna	2013	t.m.	20	16.03 ± 0.68	-20.26 ± 0.20	3.29 ± 0.11
			<i>Lebbeus polaris</i>	B-p Carnivore	Epifauna	2013	t.m.	35	16.00 ± 0.80	-20.88 ± 0.59	3.37 ± 0.11
			<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	Zooplankton	2013	w.b.	9	12.81 ± 0.45	-26.34 ± 0.39	6.37 ± 0.59
			<i>Sabinea septemcarinata</i>	Benthic Carnivore	Epifauna	2013	t.m.	10	17.71 ± 0.68	-19.51 ± 0.26	3.28 ± 0.06
			<i>Sclerocrangon ferox</i>	Benthic Carnivore	Epifauna	2013	t.m.	45	17.37 ± 0.75	-18.55 ± 0.59	3.19 ± 0.15
			<i>Synidotea bicuspida</i>	Benthic SDF	Epifauna	2013	w.b.	5	10.71 ± 0.87	-24.24 ± 0.26	3.79 ± 0.42
			<i>Themisto libellula</i>	Pelagic Carnivore	Zooplankton	2013	w.b.	8	11.22 ± 0.64	-25.77 ± 0.65	5.35 ± 0.54
Chaetognatha											
			Chaetognatha	Pelagic Carnivore	Zooplankton	2013	w.b.	9	12.89 ± 0.75	-24.96 ± 0.61	4.89 ± 0.39
Chordata											
			<i>Artediellus uncinatus</i>	Benthic Carnivore	Fish	2013	d.m.	7	17.81 ± 0.43	-21.06 ± 0.38	3.31 ± 0.03
			<i>Boreogadus saida</i>	Pelagic Carnivore	Fish	2013	d.m.	45	14.74 ± 0.96	-23.49 ± 0.42	3.30 ± 0.08
			<i>Icelus bicornis</i>	Benthic Carnivore	Fish	2013	d.m.	1	16.83	-22.11	3.10
			<i>Leptagonus decagonus</i>	B-p Carnivore	Fish	2013	d.m.	5	15.18 ± 1.05	-23.04 ± 0.39	3.44 ± 0.18
			<i>Liparis fabricii</i>	Benthic Carnivore	Fish	2013	d.m.	7	14.80 ± 0.70	-23.64 ± 0.54	3.29 ± 0.14
			<i>Lumpenus fabricii</i>	Benthic Carnivore	Fish	2013	d.m.	1	13.31	-24.18	4.12
			<i>Lycodes pallidus</i>	Benthic Carnivore	Fish	2013	d.m.	15	17.11 ± 0.43	-21.40 ± 0.38	3.13 ± 0.09

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N	
North Sea	Carnivore		<i>Lycodes sagittarius</i>	Benthic Carnivore	Fish	2013	d.m.	3	17.17 ± 0.88	-20.02 ± 0.84	3.25 ± 0.09	
			<i>Lycodes seminudus</i>	Benthic Carnivore	Fish	2013	d.m.	7	17.42 ± 0.50	-21.39 ± 0.35	3.08 ± 0.05	
			<i>Reinhardtius hippoglossoides</i>	B-p Carnivore	Fish	2013	d.m.	10	16.63 ± 0.64	-23.97 ± 0.62	5.70 ± 1.01	
			<i>Triglops nybelini</i>	B-p Carnivore	Fish	2013	d.m.	23	14.82 ± 0.43	-23.18 ± 0.34	3.36 ± 0.14	
	Cnidaria		<i>Aglantha digitale</i>	Pelagic Carnivore	Zooplankton	2013	w.b.	9	12.19 ± 0.55	-23.93 ± 0.53	3.52 ± 0.20	
	Ctenophora		<i>Beroe cucumis</i>	Pelagic Carnivore	Zooplankton	2013	w.b.	1	11.63	-25.70	4.33	
	Benthic		<i>Ctenodiscus crispatus</i>	Benthic SDF	Epifauna	2013	w.b.	10	12.91 ± 0.83	-20.47 ± 1.36	3.38 ± 0.74	
			<i>Gorgonocephalus</i> sp.	Benthic Carnivore	Epifauna	2013	w.b.	10	14.44 ± 0.62	-23.45 ± 0.70	5.04 ± 1.00	
			<i>Heliometra glacialis</i>	Benthic SF	Epifauna	2013	w.b.	25	14.30 ± 0.37	-20.98 ± 1.81	4.43 ± 4.60	
			<i>Molpadia</i> sp.	Benthic SSDF	Epifauna	2013	w.b.	19	16.03 ± 0.97	-19.05 ± 1.25	5.71 ± 1.10	
			<i>Ophiacantha bidentata</i>	Benthic SDF/SF	Epifauna	2013	w.b.	16	15.23 ± 1.06	-21.10 ± 1.47	3.54 ± 1.04	
			<i>Ophioleura borealis</i>	Benthic SDF/SF	Epifauna	2013	w.b.	39	14.43 ± 1.11	-18.94 ± 3.08	3.85 ± 1.29	
			<i>Pontaster tenuispinus</i>	Benthic SDF	Epifauna	2013	w.b.	11	14.36 ± 1.75	-17.45 ± 2.93	5.05 ± 1.52	
Mediterranean	Carnivore		<i>Astarte montagui/crenata</i>	Benthic SF	Epifauna	2013	i.v.	4	15.62 ± 0.11	-21.05 ± 0.45	4.38 ± 0.60	
			<i>Bathyarca</i> sp.	Benthic SF	Infauna	2013	i.v.	4	14.82 ± 1.56	-22.26 ± 0.80	4.43 ± 0.30	
			<i>Clione limacina</i>	Pelagic Carnivore	Zooplankton	2013	w.b.	2	11.50 ± 0.83	-26.41 ± 0.99	6.73 ± 0.62	
			<i>Cylichna alba</i>	Benthic Carnivore	Infauna	2013	i.v.	1	14.10	-22.66	4.34	
			<i>Thyasira</i> sp.	Benthic SF	Infauna	2013	i.v.	3	7.67 ± 1.16	-20.16 ± 0.30	2.95 ± 0.34	
			Thyasiridae	Benthic SF	Infauna	2013	i.v.	1	10.11	-21.77	3.21	
CENTRAL CBS												
NEARSHORE SHELF				Sediment		Sediment		3	3.30 ± 0.89	-25.90 ± 0.31	9.35 ± 0.36	

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
		Annelida									
			<i>Cistenides hyperborea</i>	Benthic SSDF	Infrauna	2012	p.b.	1	11.21 ± 0.24	-23.88 ± 0.42	8.45 ± 0.80
		Arthropoda									
			<i>Acanthostepheia malmgreni</i>	B-p Carnivore	Epifauna	2012	t.m.	4	12.87 ± 0.80	-23.35 ± 1.65	5.87 ± 2.01
						2012	w.b.	5	13.11 ± 0.59	-22.39 ± 0.81	4.09 ± 0.84
			<i>Argis dentata</i>	B-p Carnivore	Epifauna	2012	t.m.	6	15.02 ± 0.26	-22.29 ± 0.26	3.34 ± 0.18
			<i>Boreomysis</i> sp.	B-p Carnivore	Epifauna	2012	w.b.	6	10.90 ± 0.53	-24.61 ± 0.61	4.85 ± 1.44
			<i>Calanus hyperboreus</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	3	8.71 ± 0.21	-26.77 ± 0.59	9.07 ± 0.07
			<i>Eualus gaimardii</i>	B-p Carnivore	Epifauna	2012	t.m.	11	12.66 ± 0.73	-22.81 ± 0.67	4.34 ± 0.91
			<i>Hyperia galba</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	12.69	-25.83	5.25
			<i>Mysidae</i>	Pelagic Carnivore	Epifauna	2012	w.b.	12	10.74 ± 0.58	-23.94 ± 0.54	3.77 ± 0.51
			<i>Mysis oculata</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	1	9.47	-24.47	6.71
			<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	Zooplankton	2012	w.b.	1	11.98	-26.52	8.52
			<i>Saduria sabini</i>	Benthic Carnivore	Epifauna	2012	w.b.	9	11.80 ± 0.67	-21.50 ± 0.86	4.02 ± 0.44
			<i>Saduria sibirica</i>	Benthic Carnivore	Epifauna	2012	w.b.	5	11.99 ± 0.50	-21.70 ± 0.29	4.27 ± 0.85
			<i>Sclerocrangon ferox</i>	Benthic Carnivore	Epifauna	2013	t.m.	5	15.52 ± 0.30	-21.32 ± 0.19	3.27 ± 0.04
			<i>Themisto abyssorum</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	10.20	-26.80	8.24
			<i>Themisto libellula</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	10.21 ± 0.52	-26.54 ± 0.50	7.07 ± 0.16
			<i>Thysanoessa raschii</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	2	11.03 ± 0.82	-25.61 ± 0.25	5.69 ± 0.31
		Chordata									
			<i>Anisarchus medius</i>	Benthic Carnivore	Fish	2012	d.m.	49	15.30 ± 0.81	-23.04 ± 0.44	3.54 ± 0.19
						2013	d.m.	2	15.91 ± 0.31	-22.37 ± 0.23	3.36 ± 0.02
			<i>Aspidophoroides olrikii</i>	Benthic Carnivore	Fish	2012	d.m.	15	13.83 ± 1.05	-22.74 ± 0.93	3.51 ± 0.12
			<i>Boreogadus saida</i>	B-p Carnivore	Fish	2012	d.m.	64	12.49 ± 1.20	-24.14 ± 0.78	3.60 ± 0.20
						2013	d.m.	5	13.01 ± 1.71	-24.15 ± 1.45	3.41 ± 0.16
			<i>Gymnelus hemifasciatus</i>	Benthic Carnivore	Fish	2012	d.m.	1	13.49	-22.44	3.84
			<i>Gymnophantherus tricuspidis</i>	Benthic Carnivore	Fish	2012	d.m.	36	13.55 ± 1.68	-22.50 ± 1.36	3.48 ± 0.16
						2013	d.m.	1	16.59	-21.99	3.30

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
			<i>Icelus</i> sp.	Benthic Carnivore	Fish	2012	d.m.	19	13.96 ± 0.47	-22.06 ± 0.36	3.57 ± 0.12
			<i>Icelus spatula</i>	B-p Carnivore	Fish	2012	d.m.	9	15.41 ± 1.06	-22.40 ± 0.54	3.44 ± 0.09
						2013	d.m.	2	16.95 ± 0.64	-22.48 ± 0.35	3.24 ± 0.07
			<i>Liparis fabricii</i>	Benthic Carnivore	Fish	2012	d.m.	1	11.80	-24.78	4.42
			<i>Liparis</i> sp.	B-p Carnivore	Fish	2012	d.m.	3	13.10 ± 1.66	-23.87 ± 1.32	3.56 ± 0.17
			<i>Liparis tunicatus</i>	B-p Carnivore	Fish	2012	d.m.	10	12.59 ± 0.68	-23.46 ± 0.52	3.49 ± 0.17
			<i>Lycodes pallidus</i>	Benthic Carnivore	Fish	2012	d.m.	1	15.53	-22.18	3.30
			<i>Lycodes polaris</i>	Benthic Carnivore	Fish	2012	d.m.	20	14.12 ± 0.86	-21.74 ± 0.56	3.54 ± 0.33
			<i>Triglops pingelii</i>	B-p Carnivore	Fish	2012	d.m.	26	12.45 ± 0.62	-23.68 ± 0.66	3.48 ± 0.19
	Cnidaria										
			<i>Aglantha digitale</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	10.80 ± 0.28	-24.98 ± 0.88	4.09 ± 0.46
			<i>Catablema vesicarium</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	11.68	-25.46	4.61
	Ctenophora										
			<i>Beroe cucumis</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	10.79	-25.90	4.10
			<i>Mertensia ovum</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	9.89	-25.73	4.83
	Echinodermata										
			<i>Eupyrgus scaber</i>	Benthic SSDF	Epifauna	2012	w.b.	4	12.91 ± 0.49	-19.64 ± 0.49	6.62 ± 0.30
			<i>Myriotrochus</i> sp.	Benthic SDF	Epifauna	2012	w.b.	1	11.52	-21.82	4.82
			<i>Ophiocten sericeum</i>	Benthic SDF/SF	Epifauna	2012	w.b.	4	10.22 ± 0.56	-22.39 ± 1.44	3.46 ± 0.51
			<i>Urasterias lincki</i>	Benthic Carnivore	Epifauna	2013	w.b.	3	15.75 ± 0.58	-22.63 ± 2.24	6.34 ± 1.20
	Mollusca										
			<i>Clione limacina</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	9.09	-28.02	7.72
			<i>Cylichna alba</i>	Benthic Carnivore	Infauna	2012	i.v.	2	8.97 ± 0.20	-25.87 ± 0.28	6.12 ± 0.11
						2012	w.b.	6	10.03 ± 0.34	-16.73 ± 2.21	9.76 ± 1.65
			<i>Macoma moesta</i>	Benthic SDF/SF	Infauna	2012	i.v.	2	6.80 ± 0.50	-25.77 ± 1.29	16.08 ± 0.25
			<i>Nuculana pernula</i>	Benthic SDF	Infauna	2012	i.v.	1	8.91	-24.02	6.04
			<i>Similipecten greenlandicus</i>	Benthic SF	Epifauna	2012	i.v.	6	9.78 ± 0.67	-23.76 ± 0.62	3.95 ± 0.64

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
Nemertea											
		Nemertea		Benthic SS Carnivore	Epifauna	2012	w.b.	3	16.43 ± 0.33	-21.00 ± 0.44	3.82 ± 0.38
OFFSHORE SHELF											
	Sediment				Sediment	2012		6	4.00 ± 0.84	-25.39 ± 0.28	9.19 ± 0.60
						2013		1	3.96	-25.97	7.35
Annelida											
		<i>Eucranta</i> sp.		Benthic Carnivore	Infauna	2012	w.b.	4	14.60 ± 0.98	-21.55 ± 0.75	3.79 ± 0.32
		<i>Maldane</i> sp.		Benthic SSDF	Infauna	2012	w.b.	4	12.97 ± 0.78	-22.62 ± 0.46	4.26 ± 0.23
		<i>Nephtys</i> sp.		Benthic SS Carnivore	Infauna	2012	p.b.	3	14.59 ± 0.98	-21.46 ± 0.17	4.31 ± 0.16
Arthropoda											
		<i>Acanthostepheia malmgreni</i>		B-p Carnivore	Epifauna	2012	t.m.	9	14.16 ± 0.99	-23.12 ± 2.63	5.84 ± 2.73
						2012	w.b.	2	13.32 ± 0.18	-23.18 ± 0.18	3.38 ± 0.28
		<i>Argis dentata</i>		B-p Carnivore	Epifauna	2012	t.m.	17	15.21 ± 0.49	-21.25 ± 0.33	3.25 ± 0.08
		<i>Calanus hyperboreus</i>		Pelagic Herbivore	Zooplankton	2012	w.b.	6	8.85 ± 0.28	-26.83 ± 0.42	7.96 ± 1.12
		<i>Eualus gaimardii</i>		B-p Carnivore	Epifauna	2012	t.m.	10	14.27 ± 0.55	-21.63 ± 0.44	3.41 ± 0.10
		<i>Haploops laevis</i>		Benthic SF	Infauna	2012	w.b.	3	7.89 ± 0.64	-27.12 ± 0.55	3.93 ± 0.23
		<i>Paraeuchaeta</i> sp.		Pelagic Carnivore	Zooplankton	2012	w.b.	4	11.89 ± 0.42	-26.86 ± 0.32	6.35 ± 1.13
		<i>Sabinea septemcarinata</i>		Benthic Carnivore	Epifauna	2012	t.m.	10	15.84 ± 0.77	-20.53 ± 0.43	3.33 ± 0.10
		<i>Sclerocrangon ferox</i>		Benthic Carnivore	Epifauna	2013	t.m.	10	15.73 ± 0.32	-21.15 ± 0.26	3.32 ± 0.06
		<i>Themisto abyssorum</i>		Pelagic Carnivore	Zooplankton	2012	w.b.	1	10.36	-27.10	6.95
		<i>Themisto libellula</i>		Pelagic Carnivore	Zooplankton	2012	w.b.	4	9.84 ± 1.01	-27.43 ± 0.09	7.35 ± 1.68
		<i>Thysanoessa raschii</i>		Pelagic Herbivore	Zooplankton	2012	w.b.	2	11.18 ± 0.06	-25.30 ± 0.52	5.72 ± 0.10
Chordata											
		<i>Anisarchus medius</i>		Benthic Carnivore	Fish	2012	d.m.	2	14.98 ± 0.51	-22.82 ± 0.24	3.37 ± 0.01
		<i>Aspidophoroides olrikii</i>		Benthic Carnivore	Fish	2012	d.m.	42	15.58 ± 0.84	-21.70 ± 0.54	3.43 ± 0.13
						2013	d.m.	11	15.71 ± 0.42	-21.81 ± 0.22	3.47 ± 0.10

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
North Sea	Benthic	<i>Boreogadus saida</i>	B-p Carnivore	Fish	2012	d.m.	101	13.33 ± 1.38	-23.81 ± 0.92	3.53 ± 0.35	
						d.m.	11	14.98 ± 0.66	-23.29 ± 0.76	3.25 ± 0.07	
		<i>Gymnelus hemifasciatus</i>	Benthic Carnivore	Fish	2012	d.m.	2	15.96 ± 0.09	-21.57 ± 0.10	3.63 ± 0.17	
		<i>Gymnocanthus tricuspis</i>	Benthic Carnivore	Fish	2012	d.m.	4	13.75 ± 2.53	-23.70 ± 2.02	3.56 ± 0.14	
		<i>Icelus bicornis</i>	Benthic Carnivore	Fish	2012	d.m.	4	15.91 ± 0.55	-21.92 ± 0.31	3.55 ± 0.14	
		<i>Icelus</i> sp.	Benthic Carnivore	Fish	2012	d.m.	1	15.50	-22.17	3.67	
		<i>Icelus spatula</i>	B-p Carnivore	Fish	2012	d.m.	14	15.91 ± 0.79	-21.89 ± 0.63	3.42 ± 0.12	
					2013	d.m.	2	16.32 ± 1.36	-22.02 ± 0.06	3.33 ± 0.03	
		<i>Liparis tunicatus</i>	B-p Carnivore	Fish	2012	d.m.	4	12.36 ± 0.66	-25.21 ± 0.59	3.73 ± 0.19	
		<i>Lycodes pallidus</i>	Benthic Carnivore	Fish	2012	d.m.	1	16.07	-22.44	3.35	
North Sea	Pelagic	<i>Lycodes polaris</i>	Benthic Carnivore	Fish	2012	d.m.	3	16.81 ± 0.69	-22.90 ± 1.00	3.55 ± 0.30	
		<i>Lycodes rossi</i>	Benthic Carnivore	Fish	2012	d.m.	5	16.72 ± 0.13	-21.85 ± 0.43	3.23 ± 0.15	
		<i>Triglops pingelii</i>	B-p Carnivore	Fish	2012	d.m.	6	14.43 ± 0.55	-24.07 ± 1.05	3.64 ± 0.16	
		Ctenophora									
		<i>Beroe cucumis</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	4	11.50 ± 0.94	-25.41 ± 0.72	4.00 ± 0.24	
		<i>Mertensia ovum</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	8.76	-25.73	5.73	
		Echinodermata									
		<i>Ctenodiscus crispatus</i>	Benthic SDF	Epifauna	2012	w.b.	6	13.12 ± 0.83	-21.18 ± 0.67	3.86 ± 0.86	
		<i>Eupyrgus scaber</i>	Benthic SSDF	Epifauna	2012	w.b.	6	13.72 ± 0.58	-19.18 ± 0.86	6.93 ± 0.58	
		<i>Gorgonocephalus arcticus</i>	Benthic Carnivore	Epifauna	2013	w.b.	6	14.30 ± 0.87	-23.80 ± 0.83	4.07 ± 0.86	
Wadden Sea	Benthic	<i>Helometra glacialis</i>	Benthic SF	Epifauna	2013	w.b.	6	13.35 ± 0.30	-22.69 ± 0.22	3.45 ± 0.63	
		Holothuroidea									
		<i>Holothuroidea</i>	Benthic SDF	Epifauna	2012	w.b.	1	9.69	-19.02	6.54	
		<i>Myriotrochus</i> sp.	Benthic SDF	Epifauna	2012	w.b.	6	12.81 ± 0.33	-21.58 ± 1.05	4.66 ± 0.24	
		<i>Ophiacantha bidentata</i>	Benthic SDF/SF	Epifauna	2012	w.b.	11	15.74 ± 0.68	-17.32 ± 3.51	4.93 ± 2.08	
					2013	w.b.	5	14.70 ± 0.83	-22.19 ± 0.50	4.56 ± 0.78	
		<i>Ophiocten sericeum</i>	Benthic SDF/SF	Epifauna	2012	w.b.	6	12.88 ± 0.18	-22.01 ± 0.91	2.88 ± 0.53	
		<i>Pontaster tenuispinus</i>	Benthic SDF	Epifauna	2012	w.b.	1	11.29	-23.70	5.94	
					2013	w.b.	3	14.49 ± 0.65	-16.48 ± 1.58	2.22 ± 1.05	

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
			<i>Urasterias lincki</i>	Benthic Carnivore	Epifauna	2013	w.b.	6	15.16 ± 1.00	-19.99 ± 1.64	3.52 ± 0.93
	Mollusca										
			<i>Astarte</i> sp.	Benthic SF	Infauna	2012	i.v.	4	9.04 ± 0.42	-22.19 ± 0.84	4.30 ± 0.66
			<i>Bathyarca glacialis</i>	Benthic SDF/SF	Epifauna	2012	i.v.	8	10.77 ± 0.56	-22.49 ± 0.71	4.37 ± 0.25
			<i>Clione limacina</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	9.58	-27.64	5.78
			<i>Limacina helicina</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	1	8.35	-26.76	4.53
			<i>Macoma moesta</i>	Benthic SDF/SF	Infauna	2012	i.v.	2	8.76 ± 0.13	-25.15 ± 0.16	6.21 ± 0.16
			<i>Nuculana pernula</i>	Benthic SDF	Infauna	2012	i.v.	8	7.91 ± 0.47	-25.24 ± 0.73	5.39 ± 0.65
			<i>Thyasira</i> sp.	Benthic SF	Infauna	2012	i.v.	1	9.57	-22.75	4.89
	Sipuncula		Thyasirid	Benthic SF	Infauna	2012	i.v.	1	9.90	-20.63	3.81
			<i>Sipunculidae</i>	Benthic SDF	Infauna	2012	w.b.	4	11.71 ± 0.36	-22.23 ± 0.30	4.03 ± 0.13
	UPPER SLOPE										
	Sediment				Sediment	2012		6	4.22 ± 0.27	-24.97 ± 0.20	8.85 ± 1.12
						2013		1	4.29	-25.22	6.28
	Annelida										
			<i>Abyssinioe</i> sp.	Benthic SS Carnivore	Infauna	2012	w.b.	2	13.37 ± 0.82	-22.37 ± 0.41	4.18 ± 0.11
			<i>Aglaophamus malmgreni</i>	Benthic SS Carnivore	Infauna	2012	w.b.	4	15.76 ± 1.34	-22.18 ± 0.74	4.25 ± 0.46
			<i>Ampharetidae</i>	Benthic SDF	Infauna	2012	w.b.	1	13.08	-23.90	6.23
			<i>Jasmineira</i> sp.	Benthic SDF/SF	Infauna	2012	w.b.	4	13.18 ± 0.70	-23.28 ± 0.59	3.96 ± 0.13
			<i>Maldane arctica</i>	Benthic SSDF	Infauna	2012	w.b.	14	14.30 ± 0.66	-22.76 ± 0.81	4.71 ± 0.48
			<i>Maldane</i> sp.	Benthic SSDF	Infauna	2012	w.b.	13	14.53 ± 0.54	-22.52 ± 0.62	4.52 ± 0.24
			<i>Melinna cristata</i>	Benthic SDF	Infauna	2012	w.b.	6	12.24 ± 0.81	-26.13 ± 1.06	9.49 ± 1.81
	Arthropoda										
			<i>Boreomysis</i> sp.	B-p Carnivore	Epifauna	2012	w.b.	6	12.89 ± 0.76	-25.03 ± 1.27	5.28 ± 0.91
			<i>Bythocaris payeri</i>	Benthic Carnivore	Epifauna	2012	t.m.	11	15.69 ± 0.53	-21.64 ± 0.76	3.73 ± 0.82

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
			<i>Bythocaris</i> sp.	Benthic Carnivore	Epifauna	2012	t.m.	10	16.45 ± 0.34	-21.14 ± 0.46	3.30 ± 0.14
			<i>Calanus hyperboreus</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	6	9.00 ± 0.69	-27.14 ± 0.56	7.91 ± 0.86
			<i>Eualus gaimardii</i>	B-p Carnivore	Epifauna	2012	t.m.	21	15.14 ± 0.86	-20.34 ± 0.41	3.30 ± 0.42
			<i>Lebbeus</i> sp.	B-p Carnivore	Epifauna	2013	t.m.	5	15.63 ± 1.05	-20.54 ± 0.46	3.29 ± 0.17
			<i>Mysis polaris</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	1	12.18	-26.59	7.21
			<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	Zooplankton	2012	w.b.	5	12.29 ± 0.25	-26.96 ± 0.54	6.11 ± 0.49
			<i>Sclerocrangon ferox</i>	Benthic Carnivore	Epifauna	2012	t.m.	5	15.14 ± 0.31	-18.74 ± 0.50	3.20 ± 0.08
						2013	t.m.	5	15.35 ± 0.38	-19.73 ± 0.64	3.17 ± 0.10
			<i>Themisto abyssorum</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	5	10.65 ± 0.28	-27.24 ± 0.36	6.78 ± 1.92
			<i>Themisto libellula</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	4	10.47 ± 0.36	-27.35 ± 0.13	7.20 ± 0.93
	Chaetognatha										
			<i>Eukrohnia hamata</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	12.09 ± 0.36	-25.22 ± 1.21	6.00 ± 1.43
	Chordata										
			<i>Amblyraja hyperborea</i>	Benthic Carnivore	Fish	2012	d.m.	1	20.01	-20.18	2.75
			<i>Benthosema glaciale</i>	B-p Carnivore	Fish	2012	d.m.	2	16.40 ± 0.28	-23.98 ± 0.47	5.87 ± 0.85
			<i>Boreogadus saida</i>	B-p Carnivore	Fish	2012	d.m.	55	14.52 ± 0.82	-23.56 ± 0.63	3.37 ± 0.08
						2013	d.m.	8	14.62 ± 0.70	-23.21 ± 0.72	3.26 ± 0.08
			<i>Leptagonus decagonus</i>	Benthic Carnivore	Fish	2012	d.m.	10	17.24 ± 0.26	-21.73 ± 0.37	3.33 ± 0.11
			<i>Liparis fabricii</i>	Benthic Carnivore	Fish	2012	d.m.	5	14.99 ± 1.32	-23.82 ± 0.56	3.33 ± 0.06
			<i>Liparis tunicatus</i>	B-p Carnivore	Fish	2012	d.m.	35	15.08 ± 1.56	-23.66 ± 0.89	3.39 ± 0.11
			<i>Lycodes adolfi</i>	Benthic Carnivore	Fish	2012	d.m.	13	17.65 ± 0.98	-21.50 ± 0.38	3.55 ± 0.18
			<i>Lycodes pallidus</i>	Benthic Carnivore	Fish	2012	d.m.	2	17.18 ± 0.63	-21.52 ± 0.09	3.38 ± 0.24
			<i>Lycodes rossi</i>	Benthic Carnivore	Fish	2012	d.m.	6	19.32 ± 0.46	-21.24 ± 0.51	3.53 ± 0.26
			<i>Lycodes sagittarius</i>	Benthic Carnivore	Fish	2012	d.m.	4	16.25 ± 0.48	-21.86 ± 0.59	3.56 ± 0.34
						2013	d.m.	3	15.88 ± 0.34	-21.67 ± 0.18	3.15 ± 0.06
			<i>Lycodes seminudus</i>	Benthic Carnivore	Fish	2012	d.m.	29	17.85 ± 1.00	-21.10 ± 0.37	3.41 ± 0.15
						2013	d.m.	5	16.77 ± 0.77	-21.23 ± 0.30	3.02 ± 0.08
			<i>Lycodes squamiventer</i>	Benthic Carnivore	Fish	2012	d.m.	7	17.03 ± 0.65	-21.56 ± 0.38	3.32 ± 0.07

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
			<i>Reinhardtius hippoglossoides</i>	B-p Carnivore	Fish	2012	d.m.	38	16.07 ± 0.89	-22.18 ± 0.58	3.93 ± 0.60
						2013	d.m.	5	16.34 ± 0.46	-22.86 ± 0.31	4.63 ± 0.42
			<i>Triglops pingelii</i>	B-p Carnivore	Fish	2012	d.m.	4	14.51 ± 0.56	-23.98 ± 0.55	3.53 ± 0.19
	Cnidaria										
			<i>Aglantha digitale</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	12.75 ± 1.32	-22.66 ± 1.24	3.53 ± 0.21
	Ctenophora										
			<i>Beroe cucumis</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	11.36 ± 0.33	-26.09 ± 0.58	4.56 ± 0.39
	Echinodermata										
			<i>Gorgonocephalus arcticus</i>	Benthic Carnivore	Epifauna	2013	w.b.	2	15.85 ± 0.31	-22.75 ± 0.37	4.50 ± 0.68
			Holothuroidea	Benthic SDF	Epifauna	2013	w.b.	5	11.71 ± 1.47	-22.33 ± 0.52	5.76 ± 0.21
			<i>Molpadia</i> sp.	Benthic SSDF	Epifauna	2012	w.b.	17	14.33 ± 1.40	-20.43 ± 0.58	4.89 ± 0.42
			<i>Ophiacantha bidentata</i>	Benthic SDF/SF	Epifauna	2012	w.b.	12	15.40 ± 1.33	-20.73 ± 3.04	3.81 ± 1.19
			<i>Ophioleura borealis</i>	Benthic SDF/SF	Epifauna	2012	i.v.	6	11.25 ± 0.43	-22.46 ± 0.28	6.49 ± 0.44
						2012	w.b.	16	12.76 ± 1.07	-19.13 ± 2.97	3.43 ± 1.26
						2013	i.v.	5	12.23 ± 0.42	-21.04 ± 1.76	5.51 ± 0.21
			<i>Pontaster tenuispinus</i>	Benthic SDF	Epifauna	2012	w.b.	12	12.42 ± 0.57	-19.53 ± 0.78	3.19 ± 0.71
						2013	w.b.	6	13.46 ± 1.43	-18.43 ± 1.36	2.96 ± 0.49
			<i>Psilaster andromeda</i>	Benthic Carnivore	Epifauna	2012	w.b.	5	17.21 ± 1.05	-18.04 ± 1.60	3.36 ± 0.61
			<i>Urasterias lincki</i>	Benthic Carnivore	Epifauna	2013	w.b.	3	16.44 ± 0.45	-20.22 ± 1.49	3.38 ± 0.98
	Mollusca										
			<i>Clione limacina</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	7.92	-24.83	8.92
			Thyasiridae	Benthic SF	Infauna	2012	i.v.	11	7.25 ± 0.79	-21.62 ± 0.43	3.57 ± 0.15
	Sipuncula										
			<i>Sipunculidae</i>	Benthic SDF	Infauna	2012	w.b.	7	11.45 ± 1.39	-22.52 ± 1.82	4.26 ± 0.65
LOWER SLOPE											
			Sediment		Sediment	2012		5	4.96 ± 0.60	-24.12 ± 0.36	7.65 ± 0.71
						2013		1	4.75	-24.77	6.92

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
		Annelida									
			<i>Ampharetidae</i>	Benthic SDF	Infauna	2012	w.b.	2	13.39 ± 3.78	-26.17 ± 4.21	10.76 ± 6.02
			<i>Maldane arctica</i>	Benthic SSDF	Infauna	2012	w.b.	3	13.84 ± 0.25	-22.61 ± 0.68	4.56 ± 0.58
		Arthropoda									
			<i>Bythocaris payeri</i>	Benthic Carnivore	Epifauna	2012	t.m.	11	16.44 ± 0.31	-20.47 ± 0.35	3.28 ± 0.09
			<i>Bythocaris</i> sp.	Benthic Carnivore	Epifauna	2012	t.m.	13	16.48 ± 0.88	-21.30 ± 1.30	3.68 ± 1.11
						2012	w.b.	10	14.55 ± 1.08	-23.55 ± 1.75	6.25 ± 2.39
			<i>Calanus hyperboreus</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	6	9.24 ± 0.70	-26.95 ± 0.43	8.27 ± 0.47
		Decapoda		B-p Carnivore	Epifauna	2012	t.m.	6	16.84 ± 0.94	-20.08 ± 1.06	3.43 ± 0.76
						2012	w.b.	6	16.45 ± 0.49	-21.44 ± 0.62	4.11 ± 0.58
			<i>Hymenodora glacialis</i>	Pelagic Carnivore	Epifauna	2012	t.m.	12	15.26 ± 0.72	-24.58 ± 0.63	6.77 ± 1.32
			<i>Hymenodora</i> sp.	Pelagic Carnivore	Epifauna	2012	w.b.	4	14.78 ± 0.94	-23.52 ± 0.93	5.72 ± 1.48
			<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	Zooplankton	2012	w.b.	5	12.27 ± 0.33	-27.05 ± 0.65	6.07 ± 0.47
			<i>Themisto abyssorum</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	5	10.67 ± 0.51	-27.28 ± 1.13	8.34 ± 3.67
			<i>Themisto libellula</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	3	10.31 ± 0.49	-26.61 ± 0.68	5.66 ± 0.52
			<i>Thysanoessa inermis</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	1	10.70	-24.88	8.72
			<i>Thysanoessa raschii</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	1	11.41	-24.39	8.18
		Chaetognatha									
			<i>Eukrohnia hamata</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	11.36	-24.75	5.29
			<i>Parasagitta elegans</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	11.66	-24.01	4.64
		Chordata									
			<i>Amblyraja hyperborea</i>	Benthic Carnivore	Fish	2012	d.m.	10	17.54 ± 0.78	-21.05 ± 0.30	2.96 ± 0.19
						2013	d.m.	1	18.71	-20.49	2.59
			<i>Boreogadus saida</i>	B-p Carnivore	Fish	2012	d.m.	33	14.53 ± 1.27	-23.44 ± 0.83	3.38 ± 0.23
						2013	d.m.	4	15.05 ± 0.74	-23.82 ± 0.58	3.27 ± 0.18
			<i>Liparis fabricii</i>	Benthic Carnivore	Fish	2012	d.m.	10	16.91 ± 0.94	-22.85 ± 0.54	3.60 ± 0.29
			<i>Liparis tunicatus</i>	B-p Carnivore	Fish	2012	d.m.	16	15.75 ± 0.70	-23.11 ± 0.34	3.44 ± 0.09
			<i>Lycodes adolfi</i>	Benthic Carnivore	Fish	2012	d.m.	61	17.54 ± 0.84	-21.65 ± 0.61	3.53 ± 0.33

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
						2013	d.m.	10	16.79 ± 0.57	-22.33 ± 0.28	3.40 ± 0.25
			<i>Lycodes rossi</i>	Benthic Carnivore	Fish	2012	d.m.	1	20.07	-20.41	3.44
			<i>Lycodes sagittarius</i>	Benthic Carnivore	Fish	2013	d.m.	1	18.90	-21.04	3.62
						2012	d.m.	2	18.63 ± 0.33	-20.11 ± 0.50	3.43 ± 0.07
			<i>Reinhardtius hippoglossoides</i>	B-p Carnivore	Fish	2012	d.m.	53	15.89 ± 1.04	-22.39 ± 0.73	4.27 ± 0.85
						2013	d.m.	2	16.34 ± 0.68	-23.70 ± 0.25	5.59 ± 0.69
	Cnidaria										
			Actiniaria	Benthic Carnivore	Epifauna	2012	w.b.	6	16.64 ± 0.39	-21.30 ± 0.74	3.82 ± 0.30
			<i>Aglantha digitale</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	11.43 ± 0.37	-23.40 ± 0.42	3.68 ± 0.20
	Ctenophora										
			<i>Beroe cucumis</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	13.62 ± 1.06	-24.00 ± 1.92	4.67 ± 1.14
	Echinodermata										
			Holothuroidea	Benthic SDF	Epifauna	2013	w.b.	2	13.95 ± 1.63	-21.02 ± 0.91	5.23 ± 0.01
			<i>Molpadia</i> sp.	Benthic SSDF	Epifauna	2012	w.b.	3	17.28 ± 1.08	-19.86 ± 0.90	5.10 ± 1.11
			<i>Ophioleura borealis</i>	Benthic SDF/SF	Epifauna	2012	i.v.	9	11.71 ± 0.91	-22.51 ± 1.32	6.76 ± 0.38
						2012	w.b.	6	12.06 ± 0.79	-20.96 ± 5.24	4.16 ± 3.17
						2013	i.v.	5	12.52 ± 0.66	-22.08 ± 0.79	6.27 ± 0.58
						2013	w.b.	5	12.89 ± 0.98	-17.77 ± 1.88	4.32 ± 1.52
			<i>Pontaster tenuispinus</i>	Benthic SDF	Epifauna	2012	w.b.	11	12.37 ± 1.06	-22.56 ± 0.97	3.22 ± 0.45
						2013	w.b.	3	13.79 ± 2.80	-20.70 ± 1.74	3.02 ± 0.55
	Mollusca										
			<i>Bathypolypus arcticus</i>	B-p Carnivore	Epifauna	2012	visc.	12	15.24 ± 0.78	-22.19 ± 1.01	4.05 ± 0.54
			<i>Clione limacina</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	9.50	-27.89	6.67
			<i>Limacina helicina</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	2	7.70 ± 0.55	-26.69 ± 0.13	4.27 ± 0.3
	Sipuncula										
			<i>Sipunculidae</i>	Benthic SDF	Infauna	2012	w.b.	3	11.37 ± 0.67	-21.82 ± 0.97	3.84 ± 0.17

Region	Water mass	assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
WESTERN CBS												
NEARSHORE SHELF												
Sediment					Sediment	2012		1	3.79	-24.80	9.17	
Annelida												
				<i>Eucranta villosa</i>	Benthic Carnivore	Infauna	2012	w.b.	2	15.18 ± 0.64	-19.60 ± 0.29	3.62 ± 0.10
				<i>Nephtys ciliata</i>	Benthic SS Carnivore	Infauna	2012	w.b.	1	13.57	-20.80	3.83
Arthropoda												
				<i>Calanus hyperboreus</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	1	9.17	-26.20	7.73
				<i>Eualus gaimardii</i>	B-p Carnivore	Epifauna	2013	t.m.	1	12.79	-21.05	3.47
				<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	Zooplankton	2012	w.b.	1	12.18	-26.56	7.12
				<i>Sabinea septemcarinata</i>	Benthic Carnivore	Epifauna	2012	t.m.	4	14.21 ± 0.44	-20.44 ± 0.21	3.49 ± 0.34
				<i>Sclerocrangon ferox</i>	Benthic Carnivore	Epifauna	2013	t.m.	5	14.97 ± 0.13	-20.26 ± 0.12	3.31 ± 0.07
				<i>Synidotea bicuspida</i>	Benthic SDF	Epifauna	2012	w.b.	7	8.91 ± 1.23	-24.27 ± 1.12	5.66 ± 2.90
				<i>Synidotea</i> sp.	Benthic SDF	Epifauna	2013	w.b.	5	10.18 ± 0.34	-24.51 ± 0.27	3.83 ± 0.53
				<i>Themisto abyssorum</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	10.77	-26.19	6.10
				<i>Themisto libellula</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	11.04	-26.82	6.46
Chordata												
				<i>Aspidophoroides olrikii</i>	Benthic Carnivore	Fish	2012	d.m.	15	14.79 ± 0.40	-20.80 ± 0.18	3.47 ± 0.20
							2013	d.m.	10	14.95 ± 0.53	-21.15 ± 0.76	3.37 ± 0.09
				<i>Boreogadus saida</i>	B-p Carnivore	Fish	2012	d.m.	15	13.02 ± 0.63	-23.67 ± 0.54	3.44 ± 0.09
							2013	d.m.	5	14.08 ± 0.42	-23.44 ± 0.78	3.21 ± 0.13
				<i>Gymnophanthis tricuspidis</i>	Benthic Carnivore	Fish	2013	d.m.	6	14.56 ± 1.00	-21.60 ± 0.94	3.51 ± 0.07
				<i>Icelus bicornis</i>	Benthic Carnivore	Fish	2012	d.m.	10	14.97 ± 0.37	-21.50 ± 0.25	3.49 ± 0.20
							2013	d.m.	9	15.34 ± 0.37	-21.73 ± 0.38	3.18 ± 0.17
				<i>Icelus spatula</i>	B-p Carnivore	Fish	2012	d.m.	5	14.99 ± 0.38	-21.23 ± 0.33	3.31 ± 0.11
							2013	d.m.	14	15.48 ± 0.47	-21.54 ± 0.28	3.27 ± 0.07
				<i>Liparis fabricii</i>	Benthic Carnivore	Fish	2013	d.m.	2	12.54 ± 0.80	-25.56 ± 0.01	3.54 ± 0.26

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
			<i>Triglops pingelii</i>	B-p Carnivore	Fish	2013	d.m.	9	14.08 ± 0.30	-23.01 ± 0.32	3.48 ± 0.06
	Cnidaria										
			<i>Aglantha digitale</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	11.07	-23.74	3.61
	Ctenophora										
			<i>Beroe cucumis</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	11.19	-26.53	4.45
			<i>Mertensia ovum</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	9.61	-25.77	4.88
	Echinodermata										
			<i>Gorgonocephalus arcticus</i>	Benthic Carnivore	Epifauna	2013	w.b.	5	13.77 ± 0.32	-23.91 ± 1.08	4.86 ± 2.46
			<i>Heliometra glacialis</i>	Benthic SF	Epifauna	2013	w.b.	5	11.64 ± 0.35	-23.84 ± 0.45	4.80 ± 1.56
			<i>Ophiacantha bidentata</i>	Benthic SDF/SF	Epifauna	2013	w.b.	3	14.63 ± 0.60	-22.67 ± 1.03	3.83 ± 1.29
			<i>Ophiocten sericeum</i>	Benthic SDF/SF	Epifauna	2013	w.b.	3	10.16 ± 0.34	-22.71 ± 0.54	3.10 ± 0.62
			<i>Psolus</i> sp.	Benthic SDF/SF	Epifauna	2012	w.b.	7	8.12 ± 0.46	-23.78 ± 0.31	3.86 ± 1.24
			<i>Urasterias lincki</i>	Benthic Carnivore	Epifauna	2013	w.b.	3	14.30 ± 0.68	-21.76 ± 1.25	4.16 ± 0.86
	Mollusca										
			<i>Similipecten greenlandicus</i>	Benthic SF	Epifauna	2012	i.v.	6	8.53 ± 0.35	-23.68 ± 0.62	4.59 ± 0.60
						2013	i.v.	5	8.89 ± 0.28	-23.32 ± 0.59	4.09 ± 0.30
OFFSHORE SHELF											
	Sediment				Sediment	2012		2	4.52 ± 0.31	-24.69 ± 0.04	6.64 ± 1.92
						2013		1	4.95	-24.91	6.9
	Arthropoda										
			<i>Argis dentata</i>	B-p Carnivore	Epifauna	2012	t.m.	6	15.26 ± 0.27	-20.34 ± 0.16	3.22 ± 0.09
						2013	t.m.	20	15.20 ± 0.74	-19.90 ± 0.48	3.26 ± 0.35
			<i>Calanus glacialis</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	1	9.34	-26.45	6.61
			<i>Calanus hyperboreus</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	2	10.36 ± 0.99	-25.84 ± 0.06	6.92 ± 1.12
			<i>Eualus gaimardii</i>	B-p Carnivore	Epifauna	2013	t.m.	23	14.31 ± 0.62	-21.41 ± 1.07	3.30 ± 0.09
			<i>Lebbeus</i> sp.	B-p Carnivore	Epifauna	2013	t.m.	3	14.28 ± 0.28	-22.08 ± 0.25	3.46 ± 0.05

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
			<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	Zooplankton	2012	w.b.	1	13.18	-25.96	5.31
			<i>Sabinea septemcarinata</i>	Benthic Carnivore	Epifauna	2012	t.m.	5	15.56 ± 0.40	-20.22 ± 0.29	3.37 ± 0.18
			<i>Sclerocrangon ferox</i>	Benthic Carnivore	Epifauna	2013	t.m.	15	15.81 ± 0.46	-19.91 ± 0.38	3.26 ± 0.09
			<i>Synidotea</i> sp.	Benthic SDF	Epifauna	2013	w.b.	5	10.10 ± 0.21	-25.03 ± 0.36	4.09 ± 0.19
			<i>Themisto abyssorum</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	11.23	-26.32	8.17
			<i>Themisto libellula</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	9.30 ± 0.01	-26.37 ± 0.51	7.42 ± 0.71
			<i>Thysanoessa inermis</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	1	12.38	-23.31	7.61
	Chaetognatha										
			<i>Eukrohnia hamata</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	12.48 ± 1.81	-23.29 ± 1.24	4.27 ± 0.66
	Chordata										
			<i>Aspidophoroides olrikii</i>	Benthic Carnivore	Fish	2012	d.m.	5	14.91 ± 0.48	-21.55 ± 0.28	3.59 ± 0.13
						2013	d.m.	20	15.08 ± 0.45	-21.47 ± 0.71	3.39 ± 0.09
			<i>Boreogadus saida</i>	B-p Carnivore	Fish	2012	d.m.	32	13.29 ± 1.10	-23.36 ± 0.78	3.35 ± 0.10
						2013	d.m.	25	14.74 ± 0.90	-23.14 ± 0.85	3.34 ± 0.11
			<i>Gymnelus hemifasciatus</i>	Benthic Carnivore	Fish	2012	d.m.	1	16.10	-22.18	3.71
			<i>Gymnophanths tricuspidis</i>	Benthic Carnivore	Fish	2013	d.m.	2	16.02 ± 0.09	-20.74 ± 0.10	3.40 ± 0.04
			<i>Icelus bicornis</i>	Benthic Carnivore	Fish	2012	d.m.	13	14.79 ± 0.39	-22.48 ± 0.34	3.58 ± 0.13
						2013	d.m.	28	15.40 ± 0.50	-22.06 ± 0.40	3.31 ± 0.10
			<i>Icelus spatula</i>	B-p Carnivore	Fish	2012	d.m.	1	14.76	-22.31	3.52
						2013	d.m.	6	16.23 ± 0.19	-21.71 ± 0.27	3.27 ± 0.08
			<i>Liparis fabricii</i>	Benthic Carnivore	Fish	2013	d.m.	4	15.16 ± 0.29	-23.41 ± 0.82	3.35 ± 0.10
			<i>Triglops pingelii</i>	B-p Carnivore	Fish	2013	d.m.	2	14.46 ± 0.03	-23.10 ± 0.42	3.47 ± 0.03
	Cnidaria										
			<i>Aglantha digitale</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	11.10	-22.64	3.56
	Ctenophora										
			<i>Mertensia ovum</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	1	9.92	-25.11	4.66
	Echinodermata										
			<i>Gorgonocephalus arcticus</i>	Benthic Carnivore	Epifauna	2013	w.b.	9	15.42 ± 1.06	-22.91 ± 1.31	4.47 ± 1.11

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
						2013	a.r.	7	13.95 ± 0.36	-24.85 ± 0.69	6.11 ± 1.52
			<i>Helio metra glacialis</i>	Benthic SF	Epifauna	2013	w.b.	25	12.72 ± 0.63	-22.29 ± 1.71	5.20 ± 5.48
			<i>Ophiacantha bidentata</i>	Benthic SDF/SF	Epifauna	2012	w.b.	6	14.00 ± 2.08	-21.64 ± 1.46	2.57 ± 0.90
						2013	w.b.	17	14.74 ± 0.53	-21.98 ± 0.55	3.99 ± 0.85
			<i>Ophiocten sericeum</i>	Benthic SDF/SF	Epifauna	2013	w.b.	2	10.27 ± 0.50	-23.36 ± 0.93	3.57 ± 0.26
						2013	a.r.	5	10.93 ± 0.11	-23.79 ± 0.28	2.78 ± 0.97
			<i>Pontaster tenuispinus</i>	Benthic SDF	Epifauna	2012	w.b.	5	13.06 ± 0.49	-19.24 ± 0.41	2.48 ± 0.42
						2013	w.b.	15	13.60 ± 0.72	-19.71 ± 1.20	3.72 ± 0.94
			<i>Urasterias lincki</i>	Benthic Carnivore	Epifauna	2013	w.b.	3	15.03 ± 0.94	-21.56 ± 1.07	5.19 ± 1.28
Mollusca											
			<i>Similipecten greenlandicus</i>	Benthic SF	Epifauna	2012	i.v.	12	8.66 ± 0.61	-23.20 ± 1.96	4.68 ± 0.52
						2013	i.v.	10	9.98 ± 0.55	-22.98 ± 0.48	4.32 ± 0.30
UPPER SLOPE											
	Sediment				Sediment	2012		1	5.29	-24.29	7.78
						2013		2	5.26 ± 0.12	-24.67 ± 0.10	6.83 ± 0.15
Annelida											
			<i>Aglaophamus</i> sp.	Benthic SS Carnivore	Infauna	2013	w.b.	1	14.30	-22.53	4.19
			<i>Jasmineira</i> sp.	Benthic SDF/SF	Infauna	2013	w.b.	2	14.02 ± 0.45	-23.26 ± 0.13	4.48 ± 0.30
			<i>Maldane</i> sp.	Benthic SSDF	Infauna	2013	w.b.	3	14.18 ± 0.42	-22.84 ± 0.98	4.90 ± 0.54
			<i>Melinna cristata</i>	Benthic SDF	Infauna	2013	p.b.	3	12.01 ± 0.60	-25.88 ± 0.51	7.48 ± 1.22
Arthropoda											
			<i>Calanus hyperboreus</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	2	8.74 ± 0.13	-27.10 ± 0.01	9.03 ± 0.04
			<i>Eualus gaimardii</i>	B-p Carnivore	Epifauna	2012	t.m.	6	14.99 ± 0.46	-20.52 ± 0.45	3.15 ± 0.05
						2013	t.m.	20	15.27 ± 0.39	-20.52 ± 0.53	3.27 ± 0.07
			<i>Lebbeus polaris</i>	B-p Carnivore	Epifauna	2012	t.m.	6	14.92 ± 0.63	-20.83 ± 0.49	3.33 ± 0.17
			<i>Lebbeus</i> sp.	B-p Carnivore	Epifauna	2013	t.m.	11	15.04 ± 0.39	-20.35 ± 0.48	3.19 ± 0.05

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
			<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	Zooplankton	2012	w.b.	1	12.14	-26.29	6.27
			<i>Sabinea septemcarinata</i>	Benthic Carnivore	Epifauna	2012	t.m.	6	15.85 ± 0.35	-20.15 ± 0.65	3.35 ± 0.22
			<i>Sclerocrangon ferox</i>	Benthic Carnivore	Epifauna	2012	t.m.	10	15.40 ± 0.56	-18.95 ± 0.47	3.16 ± 0.09
						2013	t.m.	18	15.56 ± 0.42	-19.29 ± 0.75	3.16 ± 0.11
			<i>Themisto abyssorum</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	11.03 ± 0.21	-26.10 ± 0.02	6.75 ± 0.89
			<i>Themisto libellula</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	10.53 ± 0.06	-26.30 ± 0.12	6.68 ± 1.04
			<i>Thysanoessa inermis</i>	Pelagic Herbivore	Zooplankton	2012	w.b.	1	11.60	-23.85	7.52
	Chaetognatha										
			<i>Eukrohnia hamata</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	12.70 ± 0.16	-23.30 ± 0.31	4.22 ± 0.07
	Chordata										
			<i>Amblyraja hyperborea</i>	Benthic Carnivore	Fish	2012	d.m.	1	17.65	-20.58	2.80
						2013	d.m.	1	17.40	-21.06	2.67
			<i>Boreogadus saida</i>	B-p Carnivore	Fish	2012	d.m.	19	14.32 ± 1.01	-23.42 ± 0.70	3.30 ± 0.09
						2013	d.m.	29	15.02 ± 0.70	-23.17 ± 0.71	3.33 ± 0.08
			<i>Liparis fabricii</i>	Benthic Carnivore	Fish	2013	d.m.	2	15.88 ± 0.35	-22.93 ± 0.60	3.32 ± 0.23
			<i>Liparis tunicatus</i>	B-p Carnivore	Fish	2012	d.m.	28	14.52 ± 1.35	-23.72 ± 0.69	3.30 ± 0.14
			<i>Lycodes adolfi</i>	Benthic Carnivore	Fish	2012	d.m.	5	17.50 ± 0.60	-21.89 ± 1.03	3.64 ± 0.75
						2013	d.m.	1	19.54	-20.79	3.33
			<i>Lycodes rossi</i>	Benthic Carnivore	Fish	2012	d.m.	1	18.19	-21.81	3.86
			<i>Lycodes seminudus</i>	Benthic Carnivore	Fish	2013	d.m.	5	16.98 ± 0.60	-20.91 ± 0.83	3.15 ± 0.13
			<i>Reinhardtius hippoglossoides</i>	B-p Carnivore	Fish	2012	d.m.	13	16.19 ± 0.49	-22.54 ± 0.43	3.89 ± 0.36
						2013	d.m.	11	16.71 ± 0.74	-22.75 ± 0.79	4.73 ± 0.94
			<i>Triglops pingelii</i>	B-p Carnivore	Fish	2012	d.m.	7	14.23 ± 0.32	-23.00 ± 0.50	3.33 ± 0.13
	Cnidaria										
		Actiniaria		Benthic Carnivore	Epifauna	2012	w.b.	13	14.18 ± 0.36	-22.75 ± 0.26	4.39 ± 0.24
	Echinodermata										
			<i>Gorgonocephalus arcticus</i>	Benthic Carnivore	Epifauna	2013	a.r.	6	14.69 ± 1.01	-23.71 ± 1.22	3.89 ± 1.66
			<i>Heliometra glacialis</i>	Benthic SF	Epifauna	2013	w.b.	11	14.46 ± 0.33	-22.60 ± 0.28	3.77 ± 0.82

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
		Holothuroidea		Benthic SDF	Epifauna	2013	w.b.	6	14.28 ± 1.84	-20.53 ± 0.75	5.47 ± 0.59
		<i>Molpadia</i> sp.		Benthic SSDF	Epifauna	2012	w.b.	2	15.54 ± 0.16	-19.33 ± 0.71	4.78 ± 1.10
		<i>Ophiacantha bidentata</i>		Benthic SDF/SF	Epifauna	2012	w.b.	6	15.68 ± 0.78	-22.88 ± 0.93	3.51 ± 1.27
						2013	w.b.	10	14.19 ± 0.93	-22.61 ± 0.33	4.15 ± 0.44
		<i>Ophioleura borealis</i>		Benthic SDF/SF	Epifauna	2012	w.b.	11	11.81 ± 2.06	-20.85 ± 4.35	3.60 ± 4.76
						2013	w.b.	16	14.17 ± 1.02	-20.65 ± 0.69	3.53 ± 0.53
		<i>Pontaster tenuispinus</i>		Benthic SDF	Epifauna	2012	w.b.	12	10.35 ± 0.91	-23.63 ± 1.55	4.08 ± 2.09
						2013	w.b.	9	14.10 ± 1.58	-19.47 ± 2.19	2.85 ± 0.69
		<i>Psilaster andromeda</i>		Benthic Carnivore	Epifauna	2013	w.b.	4	15.18 ± 2.10	-20.35 ± 0.84	3.87 ± 2.18
LOWER SLOPE											
	Sediment				Sediment	2012		2	4.90 ± 0.03	-24.23 ± 0.08	8.19 ± 0.43
						2013		1	5.42	-24.34	7.06
	Annelida										
		<i>Aglaophamus malmgreni</i>		Benthic SS Carnivore	Infauna	2012	w.b.	1	14.16	-22.06	3.85
		<i>Maldane arctica</i>		Benthic SSDF	Infauna	2012	w.b.	2	13.70 ± 0.15	-22.78 ± 0.11	4.71 ± 0.02
		<i>Melinna cristata</i>		Benthic SDF	Infauna	2012	w.b.	1	10.98	-26.62	8.14
	Arthropoda										
		<i>Calanus hyperboreus</i>		Pelagic Herbivore	Zooplankton	2012	w.b.	2	9.50 ± 0.21	-26.48 ± 0.14	7.63 ± 1.03
		<i>Sclerocrangon ferox</i>		Benthic Carnivore	Epifauna	2013	t.m.	2	15.19 ± 0.88	-19.39 ± 0.57	3.17 ± 0.02
	Chordata										
		<i>Amblyraja hyperborea</i>		Benthic Carnivore	Fish	2013	d.m.	2	17.50 ± 0.50	-20.84 ± 0.17	2.77 ± 0.16
		<i>Boreogadus saida</i>		B-p Carnivore	Fish	2012	d.m.	7	13.19 ± 1.70	-23.54 ± 1.21	3.35 ± 0.05
						2013	d.m.	1	14.30	-23.59	3.26
		<i>Liparis fabricii</i>		Benthic Carnivore	Fish	2013	d.m.	3	16.25 ± 0.62	-23.28 ± 0.53	3.19 ± 0.07
		<i>Liparis tunicatus</i>		B-p Carnivore	Fish	2012	d.m.	2	16.02 ± 0.04	-22.84 ± 0.06	3.44 ± 0.08
		<i>Lycodes adolfi</i>		Benthic Carnivore	Fish	2013	d.m.	20	16.48 ± 0.68	-22.53 ± 0.60	3.30 ± 0.22

Region	Water mass assembly	Phylum	Taxon	Functional group	Food web component	Year	Tissue	n	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
									$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	
Cnidaria	<i>Lycodes sagittarius</i>	Benthic Carnivore	Fish	2013	d.m.	3	15.96 ± 0.45	-21.85 ± 0.21	3.16 ± 0.03	-21.85 ± 0.21	3.16 ± 0.03
	<i>Lycodes seminudus</i>	Benthic Carnivore	Fish	2013	d.m.	4	17.95 ± 0.75	-21.50 ± 0.80	3.29 ± 0.19	-21.50 ± 0.80	3.29 ± 0.19
	<i>Reinhardtius hippoglossoides</i>	B-p Carnivore	Fish	2013	d.m.	4	16.48 ± 0.31	-23.18 ± 0.72	5.76 ± 2.62	-23.18 ± 0.72	5.76 ± 2.62
	<i>Aglantha digitale</i>	Pelagic Carnivore	Zooplankton	2012	w.b.	2	11.98 ± 0.52	-22.54 ± 0.39	3.82 ± 0.04	-22.54 ± 0.39	3.82 ± 0.04
Echinodermata	Holothuroidea	Benthic SDF	Epifauna	2013	w.b.	8	14.35 ± 1.13	-21.38 ± 0.77	5.70 ± 0.87	-21.38 ± 0.77	5.70 ± 0.87
	<i>Molpadia</i> sp.	Benthic SSDF	Epifauna	2012	w.b.	4	16.53 ± 0.67	-19.58 ± 1.51	5.18 ± 1.10	-19.58 ± 1.51	5.18 ± 1.10
	<i>Ophiopleura borealis</i>	Benthic SDF/SF	Epifauna	2013	w.b.	14	12.80 ± 1.14	-20.92 ± 1.15	3.20 ± 0.57	-20.92 ± 1.15	3.20 ± 0.57
	<i>Pontaster tenuispinus</i>	Benthic SDF	Epifauna	2013	w.b.	8	13.27 ± 1.18	-19.84 ± 1.62	3.29 ± 0.54	-19.84 ± 1.62	3.29 ± 0.54
	<i>Psilaster andromeda</i>	Benthic Carnivore	Epifauna	2013	w.b.	6	17.47 ± 1.74	-18.74 ± 1.95	3.00 ± 1.11	-18.74 ± 1.95	3.00 ± 1.11
Sipuncula	Sipunculidae	Benthic SDF	Infauna	2012	w.b.	1	10.61	-21.94	3.84	-21.94	3.84

APPENDIX B. The $\delta^{15}\text{N}$, $\delta^{13}\text{C}$, C:N ratios, % nitrogen, and % carbon of all available bulk marine sediment samples taken during the BREA-MFP in 2012 and 2013. Sediments were sampled from the top 1 cm of sediment cores sampled at each station, at the sample depth indicated. Sampling transects in the Canadian Beaufort Sea (CBS) were delineated into three large-scale regions that differ in primary productivity regime and terrestrial influence. Sampling sites within each region were divided among four primary water mass assemblages, delineated using salinity and temperature profiles and named for position along the continental shelf and slope (see Habitat Divisions in main report).

Year	Transect	Station	Sample depth (m)	Region	Water mass assembly	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N	% N	% C
2012										
tbs										
	tbs_01	41	Western CBS	Nearshore shelf	3.79	-24.80	9.17	0.12	1.10	
	tbs_02	71	Western CBS	Offshore shelf	4.30	-24.71	5.28	0.13	0.66	
	tbs_03	196	Western CBS	Offshore shelf	4.74	-24.66	8.00	0.17	1.36	
	tbs_05	496	Western CBS	Upper slope	5.29	-24.29	7.78	0.18	1.40	
	tbs_06	744	Western CBS	Lower slope	4.92	-24.17	7.89	0.18	1.42	
	tbs_07	1006	Western CBS	Lower slope	4.88	-24.29	8.50	0.17	1.45	
gry										
	gry_01	45	Central CBS	Nearshore shelf	2.62	-26.02	9.56	0.16	1.53	
	gry_02	75	Central CBS	Offshore shelf	3.92	-25.46	8.76	0.17	1.49	
	gry_03	200	Central CBS	Offshore shelf	3.73	-25.35	9.40	0.15	1.41	
	gry_04	349	Central CBS	Upper slope	4.16	-24.98	8.35	0.17	1.42	
	gry_05	504	Central CBS	Upper slope	4.71	-24.70	7.33	0.18	1.32	
	gry_06	748	Central CBS	Lower slope	4.29	-24.48	7.89	0.18	1.42	
dal										
	dal_01	21	Central CBS	Nearshore shelf	4.31	-25.55	9.56	0.16	1.53	
	dal_02	77	Central CBS	Offshore shelf	5.62	-25.24	8.50	0.06	0.51	
	dal_03	205	Central CBS	Offshore shelf	3.76	-25.47	10.23	0.13	1.33	
	dal_04	343	Central CBS	Upper slope	4.18	-24.88	10.40	0.15	1.56	
	dal_05	487	Central CBS	Upper slope	4.30	-24.91	9.69	0.16	1.55	

Year	Transect	Station	Sample depth (m)	Region	Water mass assembly	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N	% N	% C
kug		dal_06	742	Central CBS	Lower slope	5.48	-24.10	7.50	0.18	1.35
		dal_07	992	Central CBS	Lower slope	5.61	-23.58	7.42	0.18	1.34
		kug_01	19	Central CBS	Nearshore shelf	2.96	-26.13	8.93	0.15	1.34
		kug_02	76	Central CBS	Offshore shelf	3.81	-24.98	9.12	0.17	1.55
		kug_03	226	Central CBS	Offshore shelf	3.15	-25.82	9.15	0.13	1.19
		kug_04	354	Central CBS	Upper slope	3.91	-25.29	9.20	0.15	1.38
		kug_05	512	Central CBS	Upper slope	4.07	-25.08	8.13	0.16	1.30
2013		kug_06	750	Central CBS	Lower slope	4.43	-24.40	8.69	0.16	1.39
		kug_07	1006	Central CBS	Lower slope	4.97	-24.05	6.76	0.17	1.15
	a1									
	a1	a1_02	78	Western CBS	Offshore shelf	4.95	-24.92	6.90	0.10	0.69
	a1	a1_04	349	Western CBS	Upper slope	5.35	-24.60	6.94	0.17	1.18
	tbs	a1_06	745	Western CBS	Lower slope	5.42	-24.34	7.06	0.18	1.27
	tbs	tbs_04	355	Western CBS	Upper slope	5.18	-24.74	6.72	0.18	1.21
gry										
		gry_02	72	Central CBS	Offshore shelf	3.96	-25.97	7.35	0.17	1.25
		gry_04	351	Central CBS	Upper slope	4.29	-25.22	6.28	0.18	1.13
		gry_06	746	Central CBS	Lower slope	4.75	-24.78	6.92	0.18	1.25
	dwt									
	dwt	dwt_01	1217	Central CBS	Lower slope	5.17	-24.71	6.63	0.19	1.26
	esc									
esc		esc_01	19	Central CBS	Nearshore shelf	2.58	-26.53	9.00	0.12	1.08
		esc_02	19	Central CBS	Nearshore shelf	3.65	-26.08	7.93	0.14	1.11

Year	Transect	Station	Sample depth (m)	Region	Water mass assembly	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N	% N	% C
cbh		esc_03	20	Central CBS	Nearshore shelf	3.22	-26.31	7.87	0.15	1.18
		esc_04	20	Central CBS	Nearshore shelf	2.99	-26.38	8.69	0.16	1.39
		esc_05	20	Central CBS	Nearshore shelf	2.61	-26.63	8.76	0.17	1.49
	cpy	cbh_01	38	Amundsen Gulf	Nearshore shelf	2.55	-26.69	9.85	0.13	1.28
		cbh_02	72	Amundsen Gulf	Offshore shelf	2.94	-26.45	8.47	0.15	1.27
		cbh_03	200	Amundsen Gulf	Offshore shelf	3.02	-26.07	8.00	0.15	1.20
		cbh_04	275	Amundsen Gulf	Upper slope	5.63	-24.34	7.06	0.18	1.27
	dar	cbh_05	358	Amundsen Gulf	Upper slope	6.34	-24.01	6.65	0.17	1.13
		cbh_06	273	Amundsen Gulf	Upper slope	7.59	-20.35	8.13	0.16	1.30
		cbh_07	204	Amundsen Gulf	Offshore shelf	7.74	-14.36	13.53	0.15	2.03
	bpt	cpy_01	43	Amundsen Gulf	Nearshore shelf	4.77	-9.62	24.73	0.11	2.72
		cpy_02	80	Amundsen Gulf	Offshore shelf	5.11	-23.45	8.73	0.15	1.31
		cpy_03	184	Amundsen Gulf	Offshore shelf	5.36	-24.86	6.75	0.16	1.08
		dar_01	42	Amundsen Gulf	Nearshore shelf	6.54	-20.75	9.60	0.15	1.44
		dar_02	78	Amundsen Gulf	Offshore shelf	6.40	-24.34	7.39	0.18	1.33
		dar_03	208	Amundsen Gulf	Offshore shelf	6.18	-24.73	7.10	0.20	1.42
		dar_04	348	Amundsen Gulf	Upper slope	6.44	-24.18	6.56	0.16	1.05
	bpt	dar_05	483	Amundsen Gulf	Upper slope	6.64	-22.05	7.08	0.12	0.85
		dar_06	357	Amundsen Gulf	Upper slope	5.14	-7.25	23.22	0.09	2.09
		dar_07	208	Amundsen Gulf	Offshore shelf	4.63	-7.73	37.13	0.08	2.97
		dar_08	74	Amundsen Gulf	Offshore shelf	1.45	-10.94	19.80	0.05	0.99
		bpt_01	20	Amundsen Gulf	Nearshore shelf	2.00	-9.50	32.80	0.05	1.64

Year	Transect	Station	Sample depth (m)	Region	Water mass assembly	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N	% N	% C
ulu		bpt_02	77	Amundsen Gulf	Offshore shelf	6.63	-23.64	7.24	0.21	1.52
		bpt_03	127	Amundsen Gulf	Offshore shelf	6.79	-23.97	7.90	0.20	1.58
		bpt_04	75	Amundsen Gulf	Offshore shelf	5.46	-23.76	10.08	0.13	1.31
		bpt_05	40	Amundsen Gulf	Nearshore shelf	4.87	-23.06	10.73	0.11	1.18
		ulu_01	38	Amundsen Gulf	Nearshore shelf	5.13	-3.79	53.50	0.04	2.14
		ulu_02	74	Amundsen Gulf	Offshore shelf	2.70	-6.67	28.67	0.06	1.72
		ulu_03	195	Amundsen Gulf	Offshore shelf	6.81	-12.60	13.17	0.12	1.58
		ulu_04	348	Amundsen Gulf	Upper slope	7.08	-23.54	6.38	0.16	1.02
		ulu_05	446	Amundsen Gulf	Upper slope	7.43	-23.29	6.40	0.15	0.96
		ulu_06	348	Amundsen Gulf	Upper slope	7.62	-17.00	8.85	0.13	1.15
		ulu_07	74	Amundsen Gulf	Offshore shelf	5.04	-3.33	35.00	0.04	1.40
		ulu_08	206	Amundsen Gulf	Offshore shelf	-0.17	-4.42	45.40	0.05	2.27

APPENDIX C. The $\delta^{15}\text{N}$, $\delta^{13}\text{C}$, and C:N ratios of all available zooplankton samples taken during the BREA-MFP in 2012 and 2013. Zooplankton were sampled from the upper 200 m of the water column, or from the seafloor to surface where total water depths were less than 200 m. All zooplankton isotopic values represent a single bulk sample per station. Sampling transects in the Canadian Beaufort Sea (CBS) were delineated into three large-scale regions that differ in primary productivity regime and terrestrial influence. Sampling sites within each region were divided among four primary water mass assemblages, delineated using salinity and temperature profiles and named for position along the continental shelf and slope (see Habitat Divisions in main report). Station names followed by “-ts” represent additional stations that were sampled during hydroacoustic operations. Taxa from each station are listed in alphabetical order of Phylum, then in alphabetical order of taxa within each Phylum. Trophic functional groups are also listed as a reference to readers regarding the general role that each taxon plays within the food web.

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
2012									
	tbs_01								
		Western CBS	Nearshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.17	-26.20	7.73
		Western CBS	Nearshore shelf	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.18	-26.56	7.12
		Western CBS	Nearshore shelf	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	10.77	-26.19	6.10
		Western CBS	Nearshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.04	-26.82	6.46
		Western CBS	Nearshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.07	-23.74	3.61
		Western CBS	Nearshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	11.19	-26.53	4.45
		Western CBS	Nearshore shelf	Ctenophora	<i>Mertensia ovum</i>	Pelagic Carnivore	9.61	-25.77	4.88
	tbs_02								
		Western CBS	Offshore shelf	Arthropoda	<i>Calanus glacialis</i>	Pelagic Herbivore	9.34	-26.45	6.61
		Western CBS	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	11.05	-25.88	6.13
		Western CBS	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	9.31	-26.01	6.91
		Western CBS	Offshore shelf	Chaetognatha	<i>Eukrohnia hamata</i>	Pelagic Carnivore	13.76	-22.41	3.80
		Western CBS	Offshore shelf	Ctenophora	<i>Mertensia ovum</i>	Pelagic Carnivore	9.92	-25.11	4.66
	tbs_03								
		Western CBS	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.66	-25.79	7.72

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
tbs_04	Western CBS	Offshore shelf	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	13.18	-25.96	5.31	
	Western CBS	Offshore shelf	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	11.23	-26.32	8.17	
	Western CBS	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	9.29	-26.73	7.92	
	Western CBS	Offshore shelf	Arthropoda	<i>Thysanoessa inermis</i>	Pelagic Herbivore	12.38	-23.31	7.61	
	Western CBS	Offshore shelf	Chaetognatha	<i>Eukrohnia hamata</i>	Pelagic Carnivore	11.20	-24.17	4.73	
	Western CBS	Offshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.10	-22.64	3.56	
tbs_05	Western CBS	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.83	-27.11	9.06	
	Western CBS	Upper slope	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	11.18	-26.09	7.38	
	Western CBS	Upper slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.49	-26.21	7.42	
	Western CBS	Upper slope	Arthropoda	<i>Thysanoessa inermis</i>	Pelagic Herbivore	11.60	-23.85	7.52	
	Western CBS	Upper slope	Chaetognatha	<i>Eukrohnia hamata</i>	Pelagic Carnivore	12.59	-23.08	4.26	
tbs_06	Western CBS	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.65	-27.09	9.01	
	Western CBS	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.14	-26.29	6.27	
	Western CBS	Upper slope	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	10.89	-26.11	6.11	
	Western CBS	Upper slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.57	-26.38	5.95	
	Western CBS	Upper slope	Chaetognatha	<i>Eukrohnia hamata</i>	Pelagic Carnivore	12.81	-23.53	4.17	
tbs_07	Western CBS	Lower slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.65	-26.58	6.90	
	Western CBS	Lower slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	12.35	-22.26	3.85	
gry_01	Western CBS	Lower slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.35	-26.38	8.35	
	Western CBS	Lower slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.62	-22.81	3.80	
Central CBS	Nearshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.90	-26.71	9.12		
	Nearshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	9.84	-26.89	7.19		

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
gry_02	Central CBS	Nearshore shelf	Arthropoda	<i>Thysanoessa raschii</i>	Pelagic Herbivore	10.45	-25.43	5.47	
	Central CBS	Nearshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.00	-24.36	3.76	
	Central CBS	Nearshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	10.79	-25.90	4.10	
	Central CBS	Nearshore shelf	Ctenophora	<i>Mertensia ovum</i>	Pelagic Carnivore	9.89	-25.73	4.83	
	Central CBS	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.73	-26.84	8.74	
	Central CBS	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	8.80	-27.31	8.45	
	Central CBS	Offshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	10.10	-26.36	4.26	
	Central CBS	Offshore shelf	Ctenophora	<i>Mertensia ovum</i>	Pelagic Carnivore	8.76	-25.73	5.73	
	Central CBS	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.76	-26.69	7.74	
	Central CBS	Offshore shelf	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.16	-26.62	6.15	
gry_03	Central CBS	Offshore shelf	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	10.36	-27.10	6.95	
	Central CBS	Offshore shelf	Arthropoda	<i>Thysanoessa raschii</i>	Pelagic Herbivore	11.13	-24.93	5.65	
	Central CBS	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.54	-26.76	8.53	
	Central CBS	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.25	-26.23	5.61	
	Central CBS	Upper slope	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	10.20	-26.83	6.39	
gry_04	Central CBS	Upper slope	Chaetognatha	<i>Eukrohnia hamata</i>	Pelagic Carnivore	12.35	-24.36	4.99	
	Central CBS	Upper slope	Mollusca	<i>Clione limacina</i>	Pelagic Carnivore	7.92	-24.83	8.92	
	Central CBS	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.98	-26.25	6.93	
	Central CBS	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	11.97	-26.80	6.52	
	Central CBS	Upper slope	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	10.63	-27.64	9.91	
gry_05	Central CBS	Upper slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.58	-27.33	8.15	
	Central CBS	Upper slope	Chaetognatha	<i>Eukrohnia hamata</i>	Pelagic Carnivore	11.84	-26.08	7.01	

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
	gry_06								
Central CBS	Lower slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.03	-26.43	7.59		
	Lower slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.48	-26.54	5.87		
	Lower slope	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	10.88	-26.11	6.83		
	Lower slope	Arthropoda	<i>Thysanoessa raschii</i>	Pelagic Herbivore	11.41	-24.39	8.18		
	Lower slope	Chaetognatha	<i>Eukrohnia hamata</i>	Pelagic Carnivore	11.36	-24.75	5.29		
Central CBS	Lower slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.95	-27.07	8.29		
	Lower slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.55	-26.28	6.02		
	Lower slope	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	11.13	-26.24	5.68		
	Lower slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.01	-25.83	6.07		
	Lower slope	Arthropoda	<i>Thysanoessa inermis</i>	Pelagic Herbivore	10.70	-24.88	8.72		
	Lower slope	Chaetognatha	<i>Parasagitta elegans</i>	Pelagic Carnivore	11.66	-24.01	4.64		
	Lower slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.17	-23.10	3.82		
	Lower slope	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	14.37	-22.64	5.48		
Central CBS	Nearshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.73	-26.22	8.99		
	Nearshore shelf	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	11.98	-26.52	8.52		
	Nearshore shelf	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	10.20	-26.80	8.24		
	Nearshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.57	-26.18	6.96		
Central CBS	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.73	-26.87	9.43		
	Offshore shelf	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	11.27	-27.01	7.86		
	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	9.40	-27.47	8.54		
	Offshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	11.86	-25.37	4.15		
	Offshore shelf	Mollusca	<i>Clione limacina</i>	Pelagic Carnivore	9.58	-27.64	5.78		

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
dal_03	Central CBS	Offshore shelf	Mollusca		<i>Limacina helicina</i>	Pelagic Herbivore	8.35	-26.76	4.53
	Central CBS	Offshore shelf	Arthropoda		<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.78	-27.62	8.42
	Central CBS	Offshore shelf	Arthropoda		<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.08	-27.26	6.26
	Central CBS	Offshore shelf	Arthropoda		<i>Themisto libellula</i>	Pelagic Carnivore	11.18	-27.42	4.93
	Central CBS	Offshore shelf	Ctenophora		<i>Beroe cucumis</i>	Pelagic Carnivore	11.94	-24.61	3.74
	Central CBS	Upper slope	Arthropoda		<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.86	-27.21	6.95
dal_04	Central CBS	Upper slope	Arthropoda		<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.28	-27.33	5.67
	Central CBS	Upper slope	Arthropoda		<i>Themisto abyssorum</i>	Pelagic Carnivore	10.76	-27.38	5.18
	Central CBS	Upper slope	Arthropoda		<i>Themisto libellula</i>	Pelagic Carnivore	10.07	-27.41	6.79
	Central CBS	Upper slope	Cnidaria		<i>Aglantha digitale</i>	Pelagic Carnivore	11.82	-23.53	3.39
	Central CBS	Upper slope	Ctenophora		<i>Beroe cucumis</i>	Pelagic Carnivore	11.12	-26.50	4.28
	Central CBS	Upper slope	Arthropoda		<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.99	-27.23	7.60
dal_05	Central CBS	Upper slope	Arthropoda		<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.67	-27.63	6.70
	Central CBS	Upper slope	Arthropoda		<i>Themisto abyssorum</i>	Pelagic Carnivore	10.72	-26.88	5.33
	Central CBS	Upper slope	Arthropoda		<i>Themisto libellula</i>	Pelagic Carnivore	10.92	-27.18	6.10
	Central CBS	Upper slope	Cnidaria		<i>Aglantha digitale</i>	Pelagic Carnivore	13.69	-21.78	3.68
	Central CBS	Upper slope	Ctenophora		<i>Beroe cucumis</i>	Pelagic Carnivore	11.59	-25.68	4.83
	Central CBS	Upper slope	Arthropoda		<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.33	-26.74	8.26
dal_06	Central CBS	Lower slope	Arthropoda		<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.45	-27.23	5.64
	Central CBS	Lower slope	Arthropoda		<i>Themisto libellula</i>	Pelagic Carnivore	10.88	-27.00	5.08
	Central CBS	Lower slope	Mollusca		<i>Clione limacina</i>	Pelagic Carnivore	9.50	-27.89	6.67
	Central CBS	Lower slope	Mollusca		<i>Limacina helicina</i>	Pelagic Herbivore	7.31	-26.79	4.48

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
	dal_07								
dal_07	Central CBS	Lower slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.58	-26.66	8.82	
	Central CBS	Lower slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	11.77	-27.93	6.86	
	Central CBS	Lower slope	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	10.66	-27.18	4.83	
	Central CBS	Lower slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.05	-27.01	5.84	
	Central CBS	Lower slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.70	-23.69	3.54	
	Central CBS	Lower slope	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	12.87	-25.36	3.87	
	Central CBS	Lower slope	Mollusca	<i>Limacina helicina</i>	Pelagic Herbivore	8.08	-26.60	4.06	
dal-ts1	Central CBS	Lower slope	Ctenophora	<i>Mertensia ovum</i>	Pelagic Carnivore	11.15	-26.73	5.81	
	Central CBS	Upper slope	Chaetognatha	<i>Pseudosagitta maxima</i>	Pelagic Carnivore	12.70	-25.81	4.71	
	Central CBS	Upper slope	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	13.39	-23.88	4.00	
dal-ts3	Central CBS	Offshore shelf	Arthropoda	<i>Themisto abyssorum</i>	Pelagic Carnivore	11.11	-26.98	6.51	
	Central CBS	Offshore shelf	Arthropoda	<i>Thysanoessa raschii</i>	Pelagic Herbivore	11.48	-24.87	4.41	
	Central CBS	Offshore shelf	Chaetognatha	<i>Parasagitta elegans</i>	Pelagic Carnivore	13.06	-25.24	4.31	
	Central CBS	Offshore shelf	Cnidaria	<i>Catablema vesicarium</i>	Pelagic Carnivore	11.10	-25.43	4.04	
	Central CBS	Offshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	12.19	-26.06	4.26	
	Central CBS	Offshore shelf	Ctenophora	<i>Mertensia ovum</i>	Pelagic Carnivore	10.46	-26.53	4.52	
kug_01	Central CBS	Nearshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.49	-27.39	9.11	
	Central CBS	Nearshore shelf	Arthropoda	<i>Hyperia galba</i>	Pelagic Carnivore	12.69	-25.83	5.25	
	Central CBS	Nearshore shelf	Arthropoda	<i>Mysis oculata</i>	Pelagic Herbivore	9.47	-24.47	6.71	
	Central CBS	Nearshore shelf	Arthropoda	<i>Thysanoessa raschii</i>	Pelagic Herbivore	11.61	-25.79	5.91	
	Central CBS	Nearshore shelf	Chordata	(ichthyoplankton)	Benthic Carnivore	11.69	-25.63	4.46	
	Central CBS	Nearshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	10.60	-25.61	4.41	

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
kug_02	Central CBS	Nearshore shelf	Cnidaria		<i>Catalema vesicarium</i>	Pelagic Carnivore	11.68	-25.46	4.61
	Central CBS	Nearshore shelf	Mollusca		<i>Clione limacina</i>	Pelagic Carnivore	9.09	-28.02	7.72
kug_03	Central CBS	Offshore shelf	Arthropoda		<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.41	-26.48	6.44
	Central CBS	Offshore shelf	Ctenophora		<i>Beroe cucumis</i>	Pelagic Carnivore	12.11	-25.31	3.85
kug_04	Central CBS	Offshore shelf	Arthropoda		<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.66	-26.49	6.99
	Central CBS	Offshore shelf	Arthropoda		<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.06	-26.57	5.13
kug_05	Central CBS	Offshore shelf	Arthropoda		<i>Themisto libellula</i>	Pelagic Carnivore	9.97	-27.53	7.46
	Central CBS	Offshore shelf	Arthropoda		<i>Thysanoessa raschii</i>	Pelagic Herbivore	11.22	-25.66	5.79
kug_06	Central CBS	Upper slope	Arthropoda		<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.55	-27.81	8.79
	Central CBS	Upper slope	Arthropoda		<i>Mysis polaris</i>	Pelagic Herbivore	12.18	-26.59	7.21
kug_07	Central CBS	Upper slope	Arthropoda		<i>Themisto libellula</i>	Pelagic Carnivore	10.33	-27.48	7.76
	Central CBS	Upper slope	Arthropoda		<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.06	-27.58	8.67
kug-ts1	Central CBS	Upper slope	Arthropoda		<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.27	-26.81	6.03
	Central CBS	Upper slope	Arthropoda		<i>Themisto abyssorum</i>	Pelagic Carnivore	10.95	-27.45	7.10
kug_06	Central CBS	Lower slope	Arthropoda		<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.59	-27.60	8.74
	Central CBS	Lower slope	Arthropoda		<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.11	-27.27	5.93
kug_07	Central CBS	Lower slope	Arthropoda		<i>Themisto abyssorum</i>	Pelagic Carnivore	9.81	-28.32	11.08
	Central CBS	Lower slope	Arthropoda		<i>Calanus hyperboreus</i>	Pelagic Herbivore	8.93	-27.22	7.89
kug-ts1	Central CBS	Lower slope	Arthropoda		<i>Themisto abyssorum</i>	Pelagic Carnivore	10.88	-28.54	13.30
	Central CBS	Upper slope	Arthropoda		<i>Mysis polaris</i>	Pelagic Herbivore	11.89	-26.69	9.52

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
	Central CBS	Upper slope	Arthropoda	Ostracoda		Benthic Carnivore	12.86	-26.87	9.73
2013									
dwt_01									
	Central CBS	Lower slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.60	-27.25	7.66	
	Central CBS	Lower slope	Arthropoda	<i>Paraecheta</i> sp.	Pelagic Carnivore	11.97	-28.27	7.47	
	Central CBS	Lower slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.31	-27.99	6.13	
	Central CBS	Lower slope	Chaetognatha	Chaetognatha	Pelagic Carnivore	12.59	-24.86	4.29	
esc_01									
	Central CBS	Nearshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	11.08	-27.24	5.93	
	Central CBS	Nearshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.30	-26.82	5.61	
esc_03									
	Central CBS	Nearshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	10.89	-26.14	4.63	
	Central CBS	Nearshore shelf	Chaetognatha	Unknown Cnidaria	Benthic Carnivore	10.53	-28.01	5.82	
	Central CBS	Nearshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.13	-26.12	4.24	
	Central CBS	Nearshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	12.41	-26.70	4.66	
	Central CBS	Nearshore shelf	Ctenophora	<i>Mertensia ovum</i>	Pelagic Carnivore	1.37	-26.80	2.99	
esc_04									
	Central CBS	Nearshore shelf	Chaetognatha	Unknown Cnidaria	Benthic Carnivore	10.69	-27.18	3.82	
	Central CBS	Nearshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.38	-26.22	4.06	
	Central CBS	Nearshore shelf	Ctenophora	<i>Mertensia ovum</i>	Pelagic Carnivore	11.25	-26.68	6.10	
esc_05									
	Central CBS	Nearshore shelf	Chaetognatha	Unknown Cnidaria	Benthic Carnivore	10.24	-27.45	3.96	
	Central CBS	Nearshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.36	-26.05	4.10	

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
cbh_01	Amundsen Gulf	Nearshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.39	-27.42	8.39	
	Amundsen Gulf	Nearshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.23	-27.14	5.93	
	Amundsen Gulf	Nearshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	10.88	-25.25	3.67	
cbh_02	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.75	-27.20	7.52	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	9.85	-26.72	4.76	
	Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	13.70	-24.88	4.33	
cbh_03	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.73	-27.66	7.87	
	Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	13.06	-26.44	4.43	
cbh_04	Amundsen Gulf	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.99	-28.02	6.61	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.49	-27.23	5.64	
	Amundsen Gulf	Upper slope	Chaetognatha	Chaetognatha	Pelagic Carnivore	11.44	-26.21	4.56	
	Amundsen Gulf	Upper slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.61	-24.86	3.55	
cbh_05	Amundsen Gulf	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.12	-27.33	6.63	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.28	-26.27	5.85	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.58	-24.85	5.50	
	Amundsen Gulf	Upper slope	Chaetognatha	Chaetognatha	Pelagic Carnivore	12.01	-25.21	4.23	
	Amundsen Gulf	Upper slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.50	-23.77	3.21	
cbh_06	Amundsen Gulf	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.14	-27.50	6.90	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.97	-26.22	6.48	

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
cbh_07	Amundsen Gulf	Upper slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	12.29	-25.01	4.41	
	Amundsen Gulf	Upper slope	Chaetognatha	Chaetognatha	Pelagic Carnivore	13.54	-24.51	4.64	
	Amundsen Gulf	Upper slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	12.54	-24.09	3.79	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.17	-27.23	6.92	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.81	-26.33	7.14	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	12.42	-24.90	4.37	
	Amundsen Gulf	Offshore shelf	Ctenophora	<i>Mertensia ovum</i>	Pelagic Carnivore	11.34	-26.92	0.00	
	Amundsen Gulf	Offshore shelf	Mollusca	<i>Clione limacina</i>	Pelagic Carnivore	11.00	-26.80	5.41	
cpy_01	Amundsen Gulf	Nearshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.13	-27.62	7.37	
	Amundsen Gulf	Nearshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.00	-26.44	5.66	
cpy_02	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.33	-27.25	7.87	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.91	-26.72	6.34	
	Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	13.42	-24.60	4.22	
cpy_03	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	11.08	-27.69	7.31	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.66	-26.71	5.96	
	Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	13.69	-25.02	4.65	
dar_01	Amundsen Gulf	Nearshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.55	-27.07	7.76	
	Amundsen Gulf	Nearshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.14	-26.14	5.99	
	Amundsen Gulf	Nearshore shelf	Mollusca	<i>Limacina helicina</i>	Pelagic Herbivore	8.12	-26.88	3.83	

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
	dar_02								
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.77	-27.55	7.98	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.91	-26.35	6.29	
	Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha sp.	Pelagic Carnivore	13.91	-24.60	4.06	
	Amundsen Gulf	Offshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	12.61	-24.45	3.57	
	Amundsen Gulf	Offshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	11.01	-25.76	4.73	
	dar_03								
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.29	-27.32	7.32	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.36	-26.60	5.99	
	Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	14.22	-24.50	4.29	
	Amundsen Gulf	Offshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	12.40	-24.05	3.50	
	Amundsen Gulf	Offshore shelf	Mollusca	<i>Clione limacina</i>	Pelagic Carnivore	12.18	-26.42	6.24	
	dar_04								
	Amundsen Gulf	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.51	-27.14	6.64	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	13.49	-26.27	6.64	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.32	-26.15	5.93	
	Amundsen Gulf	Upper slope	Chaetognatha	Chaetognatha	Pelagic Carnivore	12.58	-25.04	4.97	
	Amundsen Gulf	Upper slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	12.73	-23.77	3.50	
	Amundsen Gulf	Upper slope	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	11.63	-25.70	4.33	
	dar_05								
	Amundsen Gulf	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.81	-27.25	7.06	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	13.25	-25.89	5.46	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.64	-25.72	5.46	
	Amundsen Gulf	Upper slope	Chaetognatha	Chaetognatha	Pelagic Carnivore	13.57	-24.80	5.43	
	Amundsen Gulf	Upper slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	12.40	-22.90	3.20	
	Amundsen Gulf	Upper slope	Mollusca	<i>Clione limacina</i>	Pelagic Carnivore	12.08	-25.71	7.17	

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
dar_06									
	Amundsen Gulf	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.61	-27.24	6.83	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.88	-26.12	7.25	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.05	-25.55	5.70	
	Amundsen Gulf	Upper slope	Chaetognatha	Chaetognatha	Pelagic Carnivore	13.63	-24.83	5.37	
	Amundsen Gulf	Upper slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	13.01	-23.62	3.56	
dar_07									
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.93	-26.65	7.38	
	Amundsen Gulf	Offshore shelf	Arthropoda	Euphausiidae	Pelagic Herbivore	11.47	-23.80	4.24	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	13.71	-26.10	6.89	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.91	-25.00	5.71	
	Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	14.15	-24.42	4.51	
	Amundsen Gulf	Offshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	12.41	-23.65	3.37	
	Amundsen Gulf	Offshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	12.61	-25.23	4.41	
dar_08									
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.68	-27.45	8.46	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.10	-25.44	6.31	
	Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	14.31	-23.56	4.11	
	Amundsen Gulf	Offshore shelf	Mollusca	<i>Clione limacina</i>	Pelagic Carnivore	11.21	-26.84	5.85	
bpt_01									
	Amundsen Gulf	Nearshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.48	-27.30	7.03	
	Amundsen Gulf	Nearshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	10.40	-25.06	3.70	
	Amundsen Gulf	Nearshore shelf	Mollusca	<i>Limacina helicina</i>	Pelagic Herbivore	7.83	-26.07	3.92	

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
	bpt_02								
		Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.17	-26.15	6.28
		Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	8.74	-27.42	8.90
		Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	13.11	-24.81	4.20
	bpt_03								
		Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.86	-27.08	7.39
		Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.61	-27.23	8.03
		Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	13.81	-24.81	4.43
	bpt_04								
		Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.75	-27.13	6.78
		Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.76	-26.68	6.10
		Amundsen Gulf	Offshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	10.31	-25.92	3.94
	bpt_05								
		Amundsen Gulf	Nearshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.94	-27.47	8.03
		Amundsen Gulf	Nearshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	9.71	-27.39	7.27
	ulu_01								
		Amundsen Gulf	Nearshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.53	-27.64	6.87
	ulu_02								
		Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.42	-27.36	7.41
		Amundsen Gulf	Offshore shelf	Arthropoda	Euphausiidae	Pelagic Herbivore	11.22	-25.63	6.36
		Amundsen Gulf	Offshore shelf	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.49	-26.46	6.87
		Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.78	-26.91	6.97
		Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	14.19	-24.03	4.21
		Amundsen Gulf	Offshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	12.14	-26.37	4.53
	ulu_03								
		Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.50	-27.39	7.52

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
ulu_04	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.17	-26.70	6.71	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.00	-26.37	5.03	
	Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	12.83	-25.11	4.83	
	Amundsen Gulf	Offshore shelf	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.49	-24.24	3.61	
	Amundsen Gulf	Offshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	11.32	-26.16	5.12	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.30	-27.58	7.34	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.13	-26.61	6.65	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.83	-26.85	5.79	
	Amundsen Gulf	Upper slope	Chaetognatha	Chaetognatha	Pelagic Carnivore	13.13	-25.11	5.12	
	Amundsen Gulf	Upper slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	11.51	-24.11	3.61	
ulu_05	Amundsen Gulf	Upper slope	Mollusca	<i>Clione limacina</i>	Pelagic Carnivore	10.91	-27.11	6.30	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.00	-27.34	7.47	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.70	-26.43	6.88	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.36	-26.17	5.34	
	Amundsen Gulf	Upper slope	Chaetognatha	Chaetognatha	Pelagic Carnivore	12.90	-25.03	4.88	
ulu_06	Amundsen Gulf	Upper slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	12.11	-24.23	3.68	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.01	-26.99	7.13	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	13.06	-26.03	6.48	
	Amundsen Gulf	Upper slope	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	11.68	-25.88	4.68	
	Amundsen Gulf	Upper slope	Chaetognatha	Chaetognatha	Pelagic Carnivore	13.20	-23.92	4.87	
ulu_07	Amundsen Gulf	Upper slope	Cnidaria	<i>Aglantha digitale</i>	Pelagic Carnivore	12.33	-23.98	3.61	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	10.37	-27.55	7.48	

Year	Station	Region	Water mass assembly	Phylum	Taxon	Functional group	$\delta^{15}\text{N}$	$\delta^{13}\text{C}$	C:N
ulu_08	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Paraeuchaeta</i> sp.	Pelagic Carnivore	12.55	-26.69	6.40	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Themisto libellula</i>	Pelagic Carnivore	10.76	-26.15	6.04	
	Amundsen Gulf	Offshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	14.02	-24.18	3.78	
	Amundsen Gulf	Offshore shelf	Arthropoda	<i>Calanus hyperboreus</i>	Pelagic Herbivore	9.46	-27.33	6.89	
	Amundsen Gulf	Offshore shelf	Chaetognatha	Chaetognatha	Pelagic Carnivore	12.37	-24.98	5.19	
	Amundsen Gulf	Offshore shelf	Ctenophora	<i>Beroe cucumis</i>	Pelagic Carnivore	11.82	-24.84	4.62	