GOLDER
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FINAL REPORT

Chapter 8.0 Non-Indigenous and Aquatic Invasive Species (NIS/AIS) Monitoring

2021 Marine Environmental Effects Monitoring Program (MEEMP) and Non-Indigenous Species / Aquatic Invasive Species (AIS) Monitoring Program

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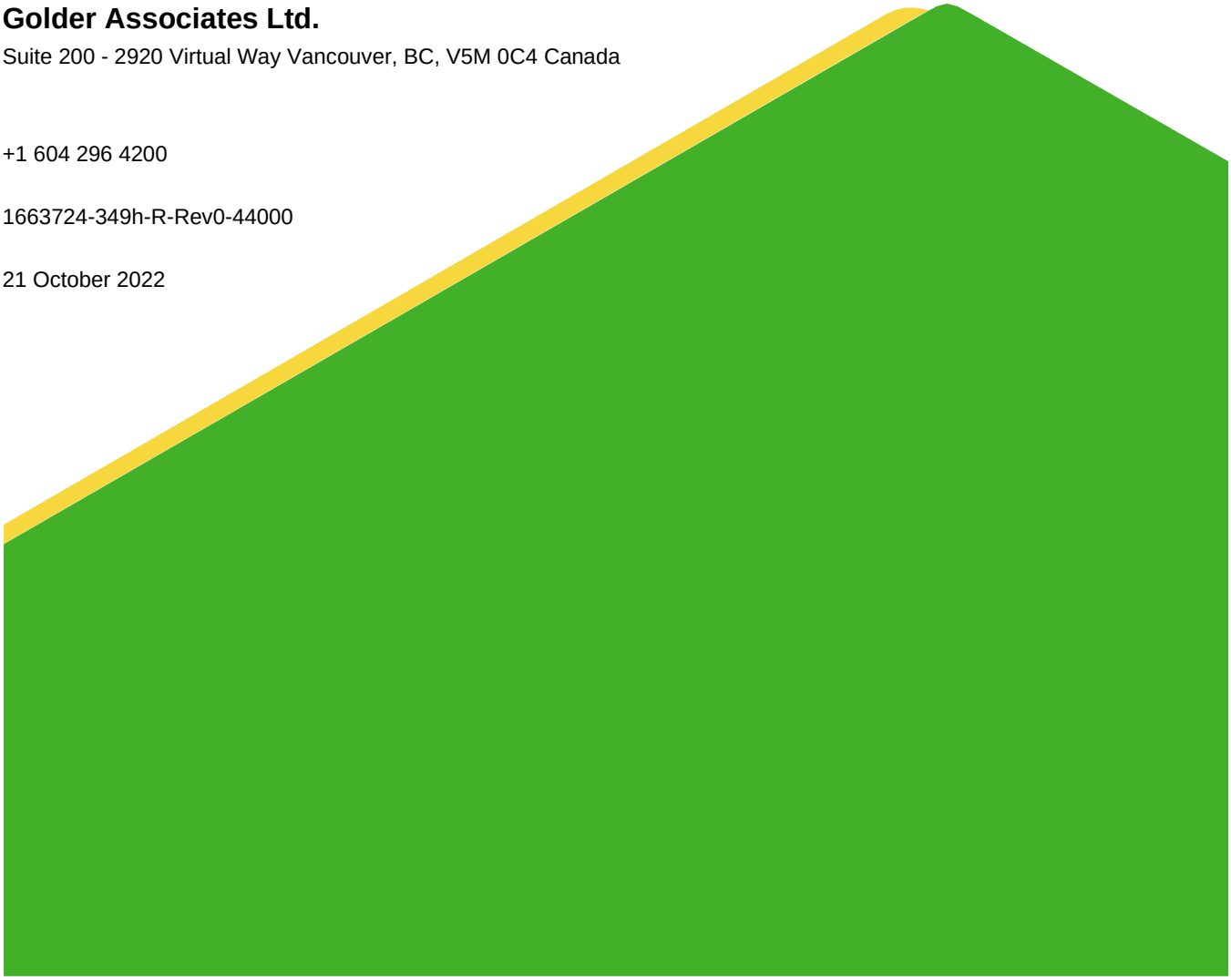

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ACRONYMS AND ABBREVIATIONS

Acronym or Abbreviation	Definition
AIS	Aquatic Invasive Species
ArcOD	Arctic Ocean Diversity
ARMS	Arctic Register of Marine Species
Biologica	Biological Environmental Services Ltd.
cf.	Compare with (taxonomy)
DFO	Fisheries and Oceans Canada
EOL	Encyclopedia of Life
FEIS	2012 Final Environmental Impact Statement
GBIF	Global Biodiversity Information Facility
GISD	Global Invasive Species Database
Indet.	Indeterminate (taxonomy)
ISSG	Invasive Species Specialist Group
IUCN	International Union for Conservation of Nature
Laval	Benthic Ecology Lab at Université Laval
MEEMP	Marine Environmental Effects Monitoring Program
MEWG	Marine Environmental Working Group
µm	micrometer
NCCOS	National Centers for Coastal Ocean Science
NEMESIS	National Exotic Marine and Estuarine Species Information System
NIS	Non-Indigenous Species
OBIS	Ocean Biogeographic Information System
PC	Project Certificate
QA/QC	Quality assurance and quality control
sp.	Species (taxonomy)
sp. nr.	Species near (taxonomy)
WoRMS	World Register of Marine Species
WRIMS	World Register of Introduced Marine Species

8.0 NON-INDIGENOUS SPECIES/AQUATIC INVASIVE SPECIES (NIS/AIS)

8.1 Introduction

This chapter presents the results of the Non-Indigenous Species (NIS) and Aquatic Invasive Species (AIS) monitoring program as a part of the larger Marine Environmental Effects Monitoring Program (MEEMP) conducted at Milne Port and in Milne Inlet during the 2021 open-water season. This component was developed in consideration of the monitoring requirements outlined in the PC Conditions described in Chapter 1.0, Table 1-2. Project Certificate (PC) Conditions related to the monitoring of NIS and AIS included PC Conditions No. 76, 87, 89, 91, 99 (a), and 99 (c).

8.1.1 Objectives

Objectives for the overall MEEMP program are outlined in Section 1.3 of Chapter 1.0 (Program Overview). Objectives specific to the NIS/AIS monitoring program are as follows:

- Sample marine environment to screen for potential Project-related introductions of taxa that are invasive or non-indigenous.
- Update taxonomic inventory of marine biota (i.e., list of organisms observed) for Milne Inlet.
- Communicate outcomes for specimens sent for independent verification.

8.1.2 Definitions

Definitions are provided below for technical terms used throughout this chapter:

Non-indigenous species (NIS): a species that exists outside the particular region or body of water where it originated naturally with the potential to become harmful.

Aquatic invasive species (AIS): a species that exists outside the particular region or body of water where it originated naturally and that can harm the environment, the economy, or society.

Cryptogenic: a species that is not demonstrably native or introduced, a species with an obscure or unknown natural range.

forma (f.): or form, indicating a secondary rank classification that designates a group with a noticeable morphological deviation.

sp.: “Species”, used to indicate the species name is indeterminate. This is typically used for samples that were damaged, juvenile, or missing features preventing a conclusive identification to species level.

indet.: “indeterminate”, used to indicate the specimen can be identified only to the listed taxonomic level, used for indeterminate taxonomic designations above genus. This is typically used for samples that were damaged, juvenile, or missing features preventing a conclusive identification beyond the indicated taxonomic level

cf.: “compare with”, in taxonomy refers to a taxonomic designation that indicates an inexact match to the indicated taxon. The specimen may represent a similar related species, an undescribed morph, or the specimen may be lacking characteristics (due to damage, lack of development of the features, or immaturity) that allow for a positive identification.

sp. nr.: “species near”, similar to “cf.”, but representing a species that is similar to the described species, however there are indications that the species is not a correct match. This may occur in poorly or newly described taxonomic groups where a specimen clearly matches the genus description but does not necessarily match the described species within it. May indicate a new to science species without a description on record.

Other terms used throughout the report include:

Flagged taxa: Taxa are flagged where there is low confidence in their identifications, uncertainties in the range on record, or presence on any of the AIS databases.

No Risk: A species is considered “No Risk” if it has a probable range that includes the Canadian Arctic, or the north Atlantic in the vicinity of the Project (i.e., Labrador Sea), and is not present in any AIS databases. For higher taxonomic levels, a taxon is considered “No Risk” if at least one representative species within the taxon has a confirmed range that includes the Canadian Arctic.

Low Risk: Taxa is considered “Low Risk” if the species (or any representative species for higher taxonomic levels) does not have a probable range that includes the Canadian Arctic, but it is not considered invasive in any AIS databases.

High Risk: Taxa is considered “High Risk” if the species (or any representative species for higher taxonomic levels) does not have a probable range that includes the Canadian Arctic, and it is considered invasive in any AIS databases.

Watchlist: a list of taxa identified in Milne Inlet that are considered to be “Low Risk” or “High Risk” but not directly attributable to the Project, or requiring more data. Taxa on this list are subjected to a heightened level of monitoring.

Trigger List: a list that contains species confirmed as Project-related introductions of High-Risk taxa. Responsive actions will be species specific and proportional to the risk.

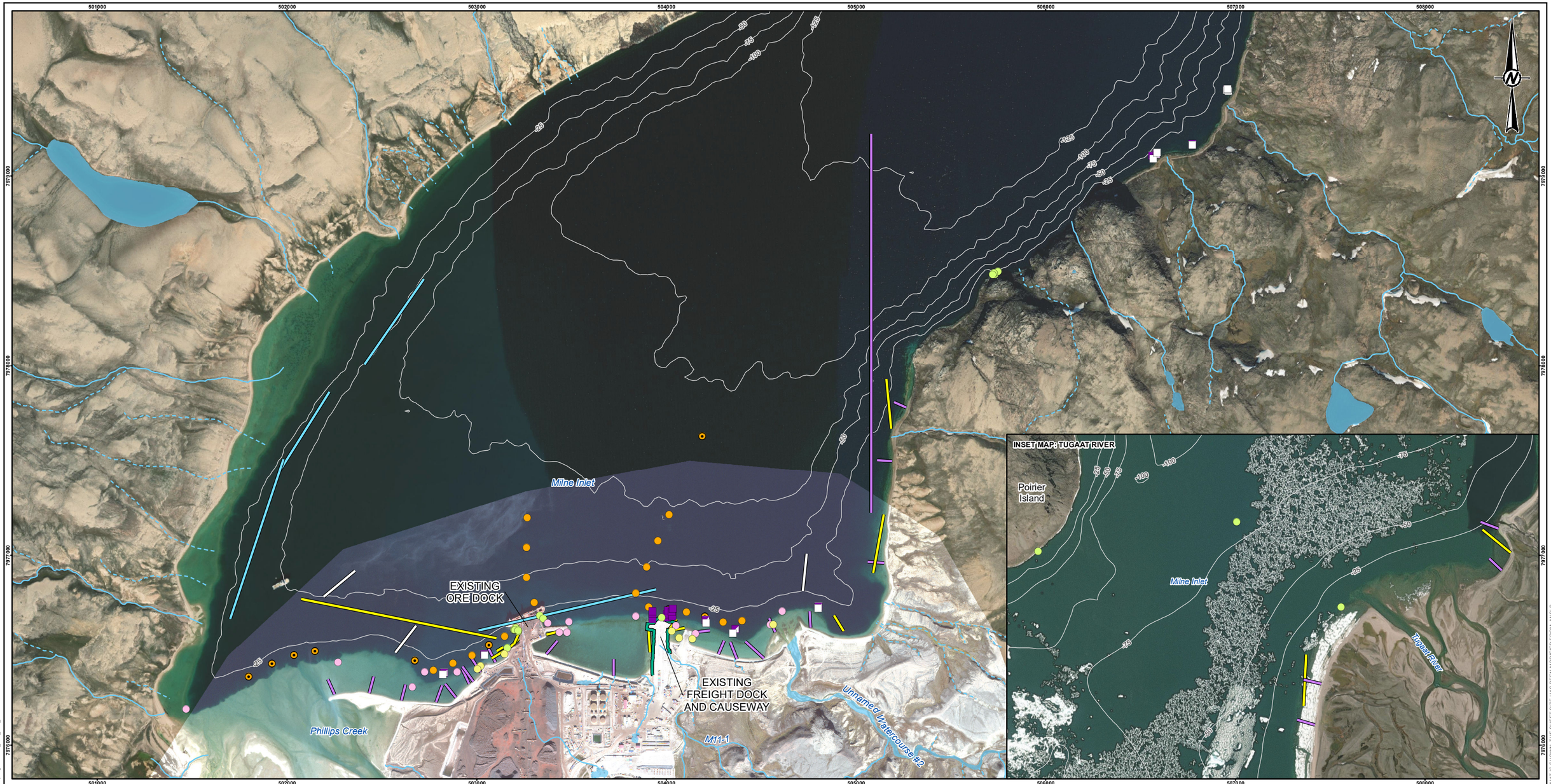
8.2 Study Design

The NIS/AIS monitoring program is designed to detect potential introductions of non-indigenous and/or invasive species from Project-related vectors such as ballast water discharges or ship hull biofouling. Since ballast water releases only occur at the anchorages and the Ore Dock in Milne Port, sampling conducted to date has largely focused on southern Milne Inlet as the area with highest likelihood of marine invasion.

NIS/AIS monitoring involves a combination of dedicated surveys as well as screening all specimens caught during surveys for all the various MEEMP components; thus, NIS/AIS monitoring involves data collection across multiple trophic levels – marine vegetation, invertebrates and fish – to establish a comprehensive inventory of existing marine biota in the Project area that serves as a point of reference for any new species/taxa identified (herein referred to as the “Milne Inlet Taxonomic Inventory”). The Milne Inlet Taxonomic Inventory was initially populated with organisms identified during baseline studies in 2008, 2010 and 2013 and has been updated annually with new records collected during MEEMP surveys; 2021 sampling locations are shown in Figure 8-1.

Dedicated surveys involve:

i) NIS/AIS sampling of benthic invertebrates at Milne Port, including collection of targeted samples for DNA barcoding (Benthic Samples for DNA Barcoding on Figure 8-2).
ii) Recruitment surveys using settlement substrates deployed in 2020 around Milne Port (Settlement Plate Only and Settlement Basket and Plate on Figure 8-2).



LEGEND

SAMPLING LOCATION

- ANGLING
- BENTHIC COMMUNITY
- BENTHIC SAMPLE FOR DNA BARCODING
- FUKUI TRAP
- HOOP NET
- QUADRAT
- QUADRAT/SETTLEMENT PLATE
- SETTLEMENT BASKET AND PLATE

SAMPLING TRANSECT

- ANGLING
- FREIGHT DOCK SURVEY
- GILL NET
- LONG LINE
- OTTER TRAWL

- BATHYMETRIC CONTOUR (25 m INTERVAL)
- INTERMITTENT WATERCOURSE
- WATERCOURSE
- WATERBODY

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1:20,000 METRES

REFERENCE(S)
BATHYMETRY CREATED BY GOLDER FROM MULTIPLE DATA SOURCES. FREIGHT DOCK DATA PROVIDED BY HATCH, MARCH 4, 2020. ADDITIONAL MILNE PORT INFRASTRUCTURE DATA OBTAINED FROM CLIENT, MAY 2, 2020 AND MAY 28, 2018. HYDROGRAPHY DATA OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED. MILNE PORT IMAGERY CAPTURED AUGUST 2020 © 2020 DIGITAL GLOBE, INC. ADDITIONAL IMAGERY COPYRIGHT © 20190802 ESRI AND ITS LICENSORS. SOURCE: MAXAR VIVID. USED UNDER LICENSE, ALL RIGHTS RESERVED.
PROJECTION: UTM ZONE 17 DATUM: NAD 83

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BAFFINLAND IRON MINES CORPORATION

PROJECT
MARY RIVER PROJECT

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-06-30
DESIGNED	CB
PREPARED	AJA
REVIEWED	CB
APPROVED	PR

TITLE
MEEMP SAMPLING LOCATIONS IN MILNE PORT USED TO INFORM NIS/AIS PROGRAM SPECIES INVENTORIES, 2021

PROJECT NO.	CONTROL	REV.	FIGURE
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NIS/AIS monitoring is recommended to be conducted annually until results of ballast water treatment and compliance monitoring, and Project vessel biofouling monitoring, are better understood. Additionally, annual monitoring not only increases the data available for Milne Port, but is also important from a regional perspective, as this program currently represents the most intensive sampling for NIS/AIS in the Canadian Arctic and has contributed to filling data gaps and advancing the science on benthic invertebrates in particular.

8.2.1 Modifications to the Program (2021)

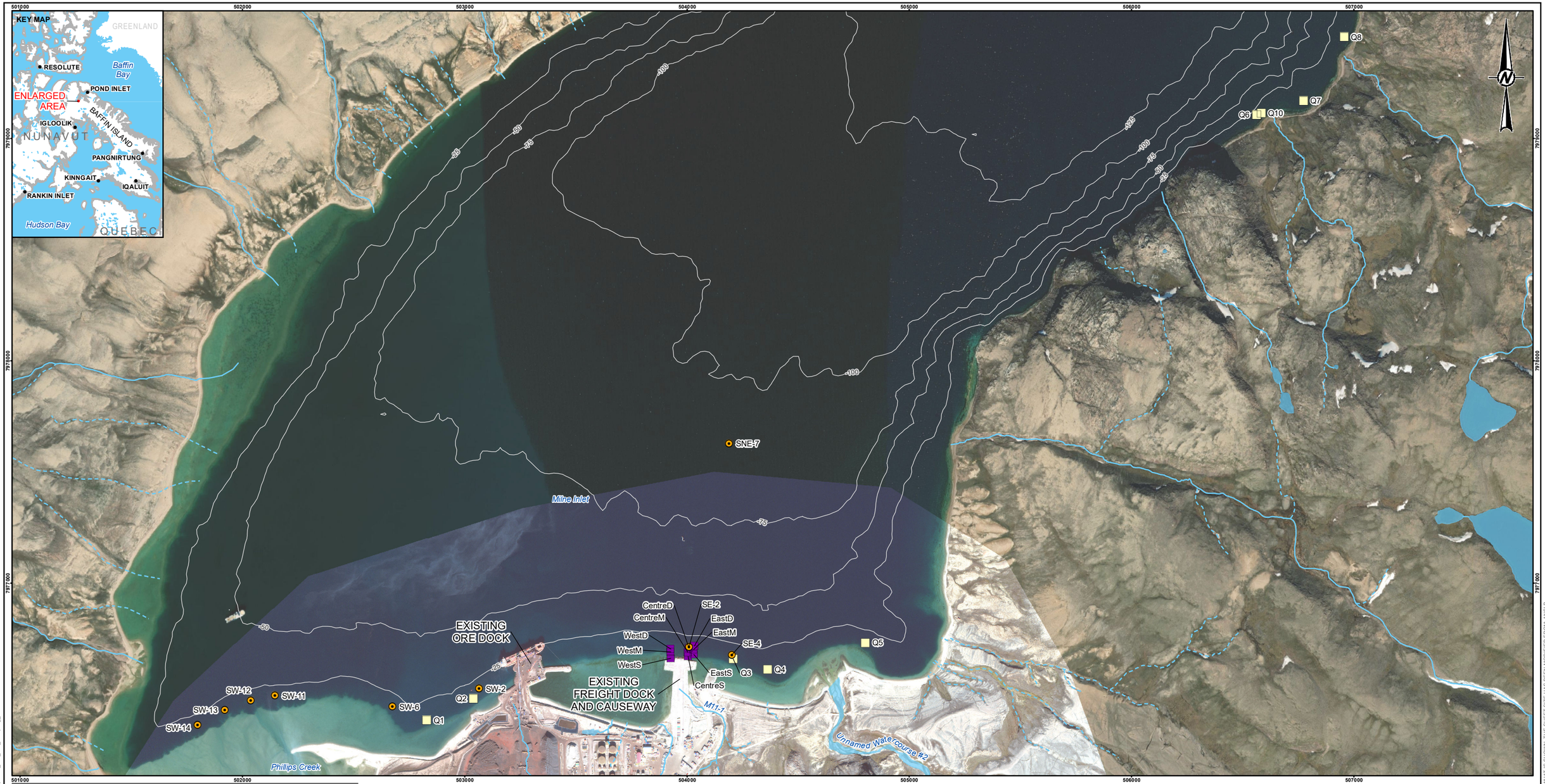
Due to multiple years of monitoring data revealing no adverse trends in benthic community indicators related to Project construction and operations, the monitoring frequency of the benthic infauna invertebrates sampling program was adjusted to every 3 years, which is more consistent with routine biological sampling for other mining effects monitoring programs (e.g., the federal Environmental Effects Monitoring Program [EEM]). As a result, benthic sampling collection in 2021 was dedicated to support the NIS/AIS program and, accordingly, focussed on areas surrounding Project infrastructure with the greatest potential for NIS/AIS detection. Sampling effort consisted of 17 stations, comparable to efforts in 2018. Additionally, 2021 was the second year that targeted sampling was conducted to obtain specimens for genetic analysis, with additional sampling locations added to the 2020 program. Nine locations were sampled where species of concern were previously observed as part of the response program (Benthic Samples for DNA Barcoding on Figure 8-2).

Zooplankton sampling was removed from the program in 2021 and replaced with monitoring for recruitment. Zooplankton samples were found to be ineffective at indicating risk of recruitment of NIS/AIS taxa due to the large variation in taxa present and given that the samples generally only represent a limited fraction of the annual planktonic community both due to physical (i.e., weather patterns) and biological (i.e., spawning timing) factors. Further, presence of juvenile NIS/AIS taxa in zooplankton may not represent an invasion as there is no indication of the viability of the organism; for example, a juvenile taxon found in zooplankton may reflect an introduction, however it is not possible to assess whether the specimen was alive at collection, and thus with the potential to establish. Recruitment was instead monitored through settlement substrates deployed at various locations throughout Milne Port (Settlement Plate Only and Settlement Basket and Plate on Figure 8-2). Taxa on settlement substrates are more likely to reflect recruitment capability as the specimen was able to establish on the substrate. Settlement baskets and plates also represent the first targeted sampling of hard substrates in Milne Port. Species associated with hard substrates are generally underrepresented in Canadian Arctic surveys due to a focus on substrates that are more readily collected with standard sampling equipment such as Ponar and Van Veen grabs.

In 2018, 2019, and 2020, underwater video of ship hulls was collected to monitor for risk of NIS/AIS introductions through biofouling. Taxonomic resolution was consistently poor due to the inability to confidently identify encrusting organisms without specimen collections and therefore ship hulls were not surveyed in 2021. The settlement substrates deployed through Milne Port are intended to monitor for recruitment of encrusting species, similar to what may be present on ship hull biofouling. Baffinland is continuing to work with Fisheries and Oceans Canada (DFO) to explore options to improve taxonomic resolution in ship hull surveys.

8.2.2 Indicators & Thresholds

The NIS/AIS monitoring program is designed as a surveillance survey and therefore does not use traditional indicators and thresholds. Detection of a single NIS/AIS will initiate a response protocol aimed to assess the risk and determine the appropriate course of action. Ultimately, species are either determined to be “No Risk” or are determined to be “High Risk” or “Low Risk” and placed on a “Watchlist” and subject to heightened monitoring efforts, or placed on a “Trigger List”, where rapid response plans and an evaluation of potential intervention measures would be developed and implemented. The taxa review process framework is depicted in Figure 8-3.



LEGEND

- BENTHIC SAMPLE FOR DNA BARCODING
- SETTLEMENT BASKET AND PLATE
- SETTLEMENT PLATE ONLY
- BATHYMETRIC CONTOUR (25 m INTERVAL)
- INTERMITTENT WATERCOURSE
- WATERCOURSE
- WATERBODY

0 500 1,000

1:17,000 METRES

REFERENCE(S)

BATHYMETRY CREATED BY GOLDER FROM MULTIPLE DATA SOURCES. FREIGHT DOCK DATA PROVIDED BY HATCH, MARCH 4, 2020. ADDITIONAL MILNE PORT INFRASTRUCTURE DATA OBTAINED FROM CLIENT, MAY 2, 2020 AND MAY 28, 2018. HYDROGRAPHY DATA OBTAINED FROM GEOGRATIS, © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED. MILNE PORT IMAGERY CAPTURED AUGUST 2020 © 2020 DIGITAL GLOBE, INC. ADDITIONAL IMAGERY COPYRIGHT © 20190802 ESRI AND ITS LICENSORS. SOURCE: MAXAR VIVID. USED UNDER LICENSE, ALL RIGHTS RESERVED.
PROJECTION: UTM ZONE 17 DATUM: NAD 83

CLIENT
BAFFINLAND IRON MINES CORPORATION

PROJECT
MARY RIVER PROJECT

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-06-30
DESIGNED	CB
PREPARED	AJA
REVIEWED	CB
APPROVED	PR

TITLE
SPECIFIC NIS/AIS SAMPLING LOCATIONS IN MILNE PORT, 2021

PROJECT NO.	CONTROL	REV.	FIGURE
1663724	44000-04	0	8-2

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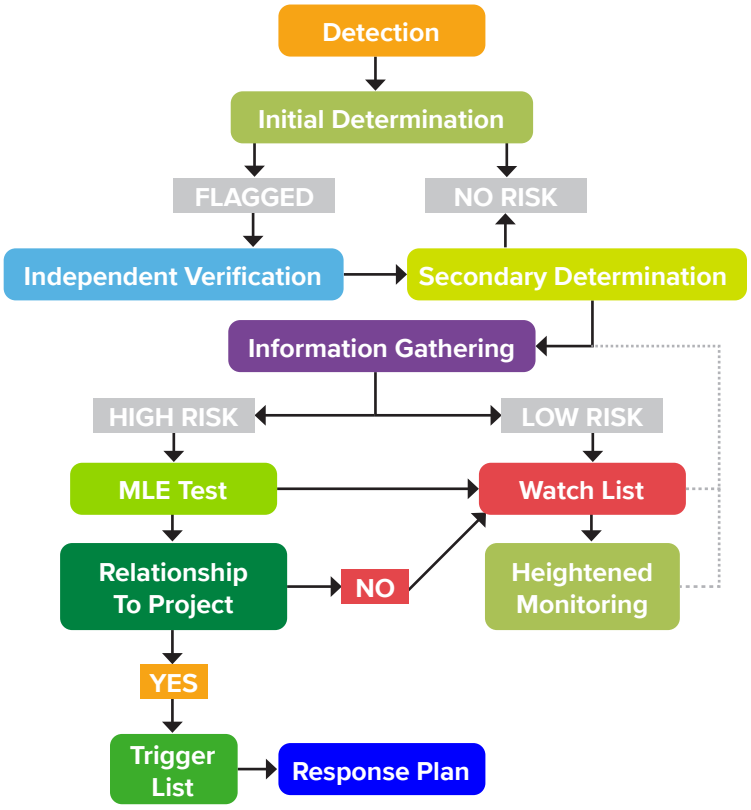
Figure 8-3: Flow Chart Describing Taxa Review Process for Flagging Species as Low or High Risk



Detection

Detection involves screening the taxonomic list received from annual survey efforts against the taxonomic inventory developed for Milne Inlet (which includes all taxa observed across all baseline and monitoring surveys) to identify taxa that have not been observed previously.

Initial Determination

Taxa identified in the detection stage are compared to existing taxonomic resources and available regional species records of occurrence. Resources include, but are not limited to, the World Register of Marine Species (WoRMS), the Global Biodiversity Information Facility (GBIF), and Arctic species inventories published or accessed through the Ocean Biogeographic Information System (OBIS). Taxa are also screened against available global and domestic AIS databases including, but not limited to, the Global invasive species database (Molnar et al. 2008), the National Exotic Marine and Estuarine Species Information System (NEMESIS), the Global Invasive Species Database (GISD) published by the IUCN Invasive Species Specialist Group (ISSG) and the invasive species list within the National Risk Assessment for Introduction of Aquatic Nonindigenous Species to Canada by Ballast Water (Casas-Monroy et al. 2014). Species, or taxa of higher levels with at least one representative species that are found to have a range that includes the Canadian Arctic and do not appear on the AIS databases are considered "No Risk" and added to the inventory. Taxa are **flagged** for independent verification where there is low confidence in their identifications, uncertainties in the range on record, or presence on any of the AIS databases.

Independent Verification

Specimens of flagged taxa are sent for an independent identification or verification of the initial identification. Currently, taxa are verified by the Benthic Ecology Lab at Université Laval. Additional specialists in particular taxonomic groups or species are also being sought to provide clarity on identifications unable to be resolved by Laval. Specimens preserved in ethanol are alternatively sent for DNA verification by the Canadian Centre for DNA Barcoding at the University of Guelph.

Secondary Determination

Results and rationale for the independent verifications are reviewed by Biologica Environmental Services Ltd. for accuracy and confidence in the identification. Results from the independent verifications are compared to the same taxonomic resources and AIS databases as described in the Initial Determination step. Species, or taxa of higher levels with at least one representative species that are found to have a range that includes the Canadian Arctic and do not appear on the AIS databases are considered "No Risk" and added to the Milne Inlet taxonomic inventory. Specimens where the initial identification was confirmed or updated identifications with uncertainties in the range on record, or a presence on any of the AIS databases are flagged for a more detailed review stage.

Information Gathering

All taxa not determined to be "No Risk" following Secondary Determination are subjected to a detailed and focussed literature review. Information Gathering includes examining documented occurrences relative to the range on record, as well as genetic and phylogenetic studies that may help resolve a taxon's origin. Following the review, taxa will either be classified as "Low Risk" and added to the Watchlist, or classified as "High Risk" and subjected to the MLE Test.

MLE Test

The Multiple Lines of Evidence (MLE) test is applied to all "High Risk" taxa determined through the Information Gathering step. Recognizing the limitations of existing AIS databases, the MLE test informs whether site-specific biogeographic, ecological, and genetic evidence supports the categorization of a particular species/taxon as invasive. Biogeographic evidence may include information from the historical taxonomic record or historical documented occurrences. Ecological evidence considers vectors of introduction as well as whether the species/taxon of concern is displaying invasive behaviour at Milne Port (i.e., increase in relative abundance, geographic spread, change in benthic community indices). Genetic evidence may help resolve trickier taxonomic identifications and may also identify related or source populations of the same species in linked Ports and nearby areas.

Relationship To Project

Following the MLE test, a determination will be made as to whether a potential introduction is Project-related. An introduction is considered Project-related if a species/taxon was not documented in baseline surveys or if there are no documented occurrences in the Canadian Arctic prior to the commencement of shipping operations. Introductions attributable to the Project will be added to the Trigger List while those that are not will be added to the Watchlist.

Watch List

The Watchlist is a list of taxa identified in Milne Port that are considered to be "Low Risk" or "High Risk" but not attributable to the Project. Taxa on this list are subjected to a heightened level of monitoring, which may include increased surveillance through targeted sampling events, and the involvement of taxonomic specialists. Additionally, each year the taxa is reidentified in samples, the Information Gathering step will be performed again to review any updates to the literature and NIS/AIS status of the taxa. The taxa will be reassessed as "No Risk", "Low Risk" or "High Risk" accordingly.

Heighted monitoring includes annual sampling at the locations where taxa have been previously observed to monitor for changes in metrics such as relative abundance, species diversity and richness, and other indications that the taxa is displaying invasive behaviours. Should invasive behaviours be identified, the taxa will be considered "High Risk" and the MLE Test performed again.

Trigger List

The Trigger List contains species confirmed as Project-related introductions of High-Risk taxa. Responsive actions will be species specific and proportional to the risk.

Response Plan

Species specific response plans will be developed in collaboration with DFO and may include possible interventions such as control or eradication efforts, balancing the environmental impacts of the response.

8.3 Materials and Methods

The 2021 MEEMP and NIS/AIS monitoring programs were conducted over eight weeks between 30 July and 19 August by a field team composed of Golder biologists and SCUBA divers, a subcontracted SCUBA diver, a Golder vessel operator, and a local Inuit field technician from Pond Inlet, NU. Sampling was conducted from a 30-foot aluminum vessel (research vessel) in addition to a 20-foot and a 16-foot zodiac tender vessels based at the Milne Port facility.

8.3.1 Sample Collection for Taxonomic Identification

8.3.1.1 Benthic Infauna, Macroflora and Benthic Epifauna, Fish and Incidentals

All specimens caught during surveys for all the various MEEMP components were screened for NIS/AIS status, including benthic infaunal and epifaunal invertebrates (Chapter 4.0 and Chapter 5.0, respectively), macroflora (Chapter 5.0), fish species (Chapter 6.0), and taxa found in fish stomachs (Chapter 7.0). Methodology for these collections are described in the respective chapters of this Report. Additional observations of species presence were made as part of monitoring of offset habitat in Milne Port along the Freight Dock, reported in Golder (2022).

Collection of benthic infaunal invertebrate samples followed the same methodology as used in previous years, as described in Chapter 4.0. Incidental samples were also collected opportunistically during SCUBA surveys for macroflora and epifauna as well as during fishing efforts; the specimens have been sent for taxonomic and/or genetic analysis due to the difficulty of field identification. All samples were preserved in 10% formalin and submitted to Biologica Environmental Services Ltd. (henceforth referred to as “Biologica”; a Canadian marine and freshwater taxonomy laboratory) for taxonomic identification.

8.3.1.2 Settlement Substrates

In 2020, settlement substrates were deployed in various locations throughout Milne Port to monitor for recruitment of encrusting taxa. Each station was configured as three to five settlement baskets filled with locally sourced cobble and five settlement plates (comprised of a 5-gallon bucket lid stacked horizontally) attached to a line with a subtidal buoy (Figure 8-4). Stations were located at -3 m, -8 m, and -15 m water depth, along the east, north and west faces of the Freight Dock as well as various depths co-located with the quadrats (Table 8-1, Chapter 5.0).

One settlement basket and plate will be collected during each monitoring year to represent immediate to short term colonization, and then redeployed for retrieval in future monitoring programs. In subsequent years, the next settlement basket and plate in the series will be collected, which will have been deployed for two or more years to represent short to medium term colonization.

Due to supply chain limitations associated with COVID-19 in 2020, baskets could not be obtained for all stations, and baskets were therefore not deployed at the quadrats until 2021. At these stations, divers collected a single plate. Baskets were brought to the surface and placed in clean 4-gallon buckets with in-situ water. Plates were cut underwater to unwrap from the center line and placed within a collection bag and brought to the surface where they were placed in a clean plastic tote with in-situ water. The cobbles were removed from the basket and photographed prior to being placed into an 8-gallon sample bucket. The plates were photographed prior to being cut into quarters using a knife and then placed in a 4-gallon sample bucket. Samples were preserved with 10% formalin. The buckets were sealed and inverted several times to promote homogenization with the formalin. The buckets were labeled internally and externally with water-resistant labels and sent to Biologica for taxonomic analysis of attached and motile invertebrates, and marine vegetation.

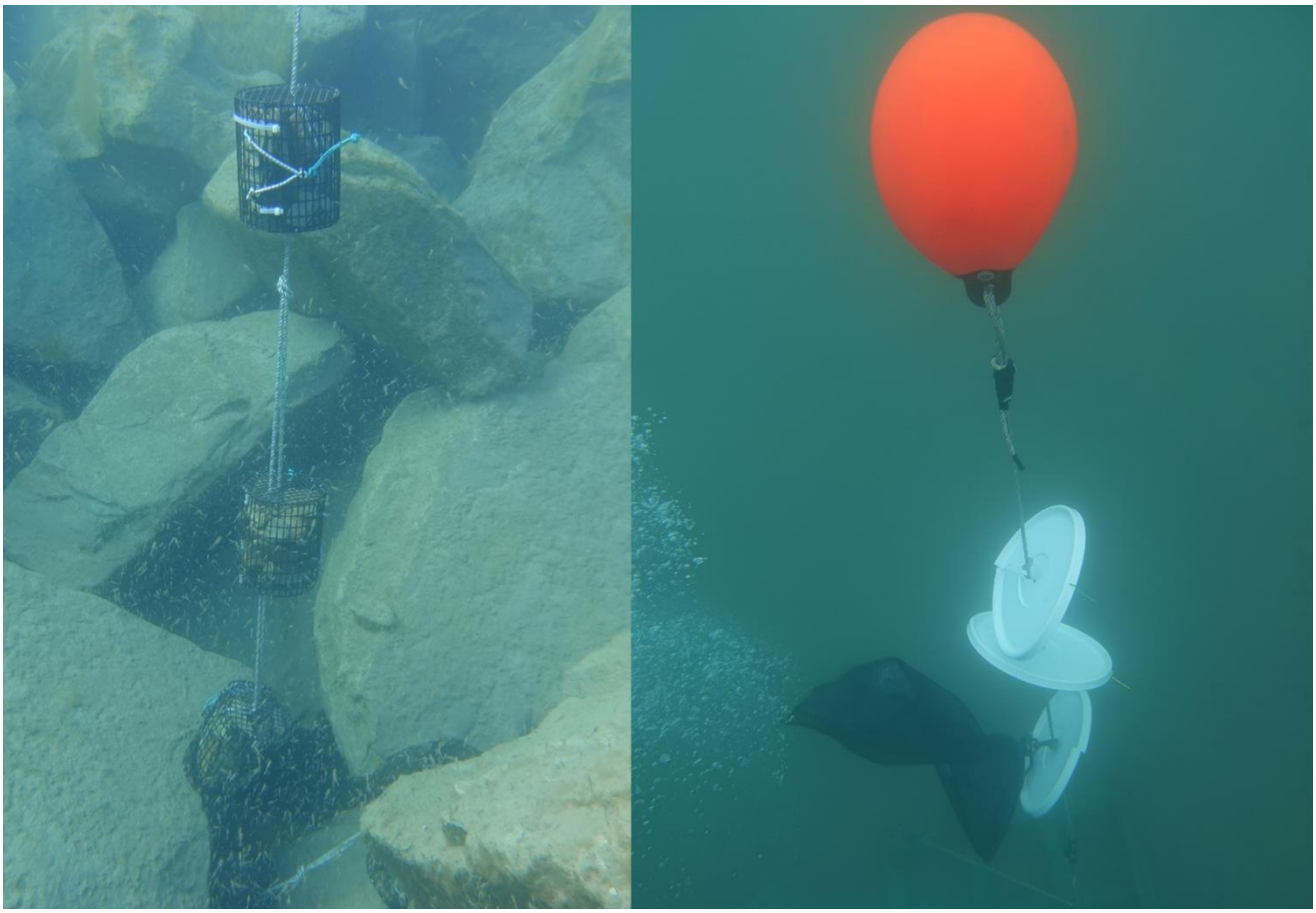


Figure 8-4: Settlement baskets deployed along the face of the freight dock and settlement plates from the quadrats.

Table 8-1: Summary of Settlement Basket and Plate Stations

Station	Location (NAD 83 UTM 17W)		Depth (m below CD)	Substrate	Date Recovered
	Easting (m)	Northing (m)			
West S	503927	7976662	-4.4	Basket and Plate	10 August
West M	503926	7976690	-7.8	Basket and Plate	15 August
West D	503926	7976703	-10.0	Basket and Plate	15 August
Centre S	504005	7976670	-9.1[1]	Basket and Plate	14 August
Centre M	504003	7976689	-8.7	Basket and Plate	10 August
Centre D	504008	7976708	-15.2	Basket and Plate	14 August
East S	504031	7976679	-8.7	Basket and Plate	10 August
East M	504029	7976700	-12.3	Basket and Plate	15 August

Station	Location (NAD 83 UTM 17W)		Depth (m below CD)	Substrate	Date Recovered
	Easting (m)	Northing (m)			
East D	504033	7976717	-16.8	Basket and Plate	14 August
Q1	502828	7976382	-9.1	Plate only	14 August
Q2	503039	7976480	-9.8	Plate only	Not recovered[2]
Q3	504208	7976659	-10.9	Plate only	15 August
Q4	504363	7976611	-12.2	Plate only	6 August
Q5	504802	7976731	-12.4	Plate only	6 August
Q6	506563	7979107	-15.9	Plate only	8 August
Q7	506774	7979170	-10.2	Plate only	16 August
Q8	506957	7979457	-10.7	Plate only	16 August
Q9	506997	7979599	-10	Plate only	11 August[3]
Q10	506584	7979115	-6.5	Plate only	8 August

[1]Depth for Centre S station is inferred from bathymetry data as field measurement was not recorded at the time of survey.

[2]Q2 was not able to be located by divers. A new quadrat and settlement substrates were deployed at the target location.

[3]Q9 was relocated in 2021. These coordinates represent the location where the plate was originally deployed and differ from the coordinates presented for this deployment in Chapter 5.0.

8.3.2 Sample Collection for Genetic Analysis

In 2021, targeted sampling occurred at nine stations in Milne Port where potential high risk taxa that were placed on the program Watchlist were collected in previous years (Table 8-2 and Benthic Samples for DNA Barcoding, Figure 8-2).

Table 8-2: Benthic Stations Sampled for DNA Barcoding and Target Taxa (Putative Identifications)

Station	Location (NAD 83 UTM 17W)		Target Taxa
	Easting	Northing	
SW-2	503064	7976526	*Marenzelleria* sp. and *Monocorophium* sp.
SW-6	502674	7976444	*Monocorophium* sp.
SW-11	502146	7976494	*Marenzelleria* sp.
SW-12	502037	7976473	*Marenzelleria* sp.
SW-13	501920	7976428	*Marenzelleria* sp.
SW-14	501797	7976360	*Marenzelleria* sp.
SE-2	504009	7976714	*Marenzelleria* sp. and *Monocorophium* sp.
SE-4	504202	7976677	*Monocorophium* sp.
SNE-7	504189	7977629	*Monocorophium* sp.

These samples were collected and processed in a similar manner to the other benthic infauna samples, however, the samples were preserved in 90% ethanol, rather than formalin, to allow for DNA analysis should the flagged taxa be identified again in 2021.

All samples collected for DNA analysis were sent to Biologica for identification, sorted following the same procedures for benthic infauna samples (Section 8.3.1.1) and were further sorted for target taxa, which would be sent for barcoding. Targeted taxa included potential NIS/AIS species that were placed on the Watchlist after being flagged in previous surveys and also included other potential invasive taxa for Nunavut compiled from a high-risk species brochure (Appendix 8F-3; Government of Nunavut 2016). Whole specimen or tissue samples of taxa sent for DNA verification were sent to the Canadian Centre for DNA Barcoding (CCDB) at the University of Guelph for barcoding. Laboratory methodologies are detailed in Appendix 8D-3.

In order to improve taxonomic resolution of macroflora data, macroflora specimens were opportunistically collected during dive surveys in Milne Port and sent to Biologica for identification. Collection methodology is detailed in Chapter 5.0. Macroalgae are particularly challenging to identify due to their relatively simple anatomy, convergence, rampant phenotypic plasticity, and alternation of heteromorphic generations (Saunders, 2005). While systematists currently rely on genetic tools for identification, the transition from traditional taxonomy to DNA barcoding is a slow process due to unreliable or unavailable reference sequences in publicly accessible databases. Therefore, the macroalgae specimens collected from permanent quadrats in Chapter 5.0 were analysed using a two-tiered approach: specimens were first morphologically analysed by an algal taxonomist (Dr. Sandra Lindstrom, UBC) and then sent to the CCDB for barcoding. QA/QC of the DNA barcoding results is ongoing at the time of finalizing this report. Laboratory methodologies and results are detailed in Appendix 8D-4.

8.3.3 Data Analysis

8.3.3.1 Taxonomic Identification and Literature Review

Data presented in this chapter includes presence only, rather than enumeration, since relative abundance and other species metrics were not of interest for the NIS/AIS monitoring program. Abundance and diversity metrics for quadrats are presented in Chapter 5.0.

Benthic infauna, fish stomachs, and other samples collected incidentally were sent to Biologica for taxonomic identification, with specimens identified to the lowest possible taxonomic level. The process for reviewing and assessing the status of the identified taxa is described in Figure 8-3. All specimens were compared to the Milne Inlet Taxonomic Inventory, and those not on the Inventory (i.e., not found in previous surveys) were assessed further through literature review to determine if their known distributions and ranges included north Atlantic, Arctic and/or Canadian Arctic waters. The inventory was also updated to include any new or updated accepted species names for any previously identified species.

Information on general species biology and distributions for the literature review was sourced from:

- World Register of Marine Species (WoRMS 2022)
- Global Biodiversity Information Facility (GBIF 2022)
- Encyclopedia of Life (EOL 2020)
- SeaLifeBase (Palomares and Pauly 2021)

- Marine Species Identification Portal (ETI 2022)
- National Centers for Coastal Ocean Science (NCCOS 2017)
- Arctic Register of Marine Species (ARMS) compiled by the Arctic Ocean Diversity (ArcOD 2022, Sirenko et al. 2022)
- Arctic species inventories published or accessed through the Ocean Biogeographic Information System (OBIS 2022)

In addition, specimens were also compared against the following global and domestic AIS databases:

- Global invasive species database (Molnar et al. 2008)
- National Exotic Marine and Estuarine Species Information System (NEMESIS; Fofonoff et al. 2022)
- Global Invasive Species Database (GISD) published by the IUCN Invasive Species Specialist Group (ISSG 2022)
- Known invasive species list within the National Risk Assessment for Introduction of Aquatic Nonindigenous Species to Canada by Ballast Water (Casas-Monroy et al. 2014)
- World Register of Introduced Marine Species (WRIMS; Rius et al. 2022)

Specimens were not always identified to the species level due to a variety of limitations such as incomplete or disputed morphological descriptions available for some taxonomic groups, missing or undeveloped (juvenile) features, or damage to specimens. These specimens were recorded to the lowest practical taxonomic level as indet. (indeterminate) or sp. (species) when identifiable to the genus level. When an inexact match to a species was made, the designations cf. (compare with) and sp. nr. (species near) were used to indicate the specimen was similar to or represented an unknown species near to the indicated taxon, respectively (see Section 8.1.2 Definitions). For literature review, where taxa were not identifiable to the species level, an attempt was made to confirm the higher taxon includes members that have a distribution or range that included north Atlantic, Arctic and/or Canadian Arctic waters. The higher taxonomic levels were also compared to the invasive species databases; for example, if a specimen from Milne Inlet could only be identified to genus, and the database revealed that no species within that genus have ranges that include the Canadian Arctic, the specimen was flagged for further review.

The Canadian Arctic is understudied, particularly in comparison to other Arctic regions (Sirenko et al. 2022, Figure 8-5). Surveys and species inventories in the Canadian Arctic are not exhaustive, and species descriptions may not include a comprehensive description of range. Rarer and more recently described taxa may not have a report of occurrence or range on record within Canadian Arctic waters despite having the potential to be present. Species where the native range is unknown, disputed, or uncertain are considered cryptogenic, being unable to be classified as native or introduced where they are found to be present.

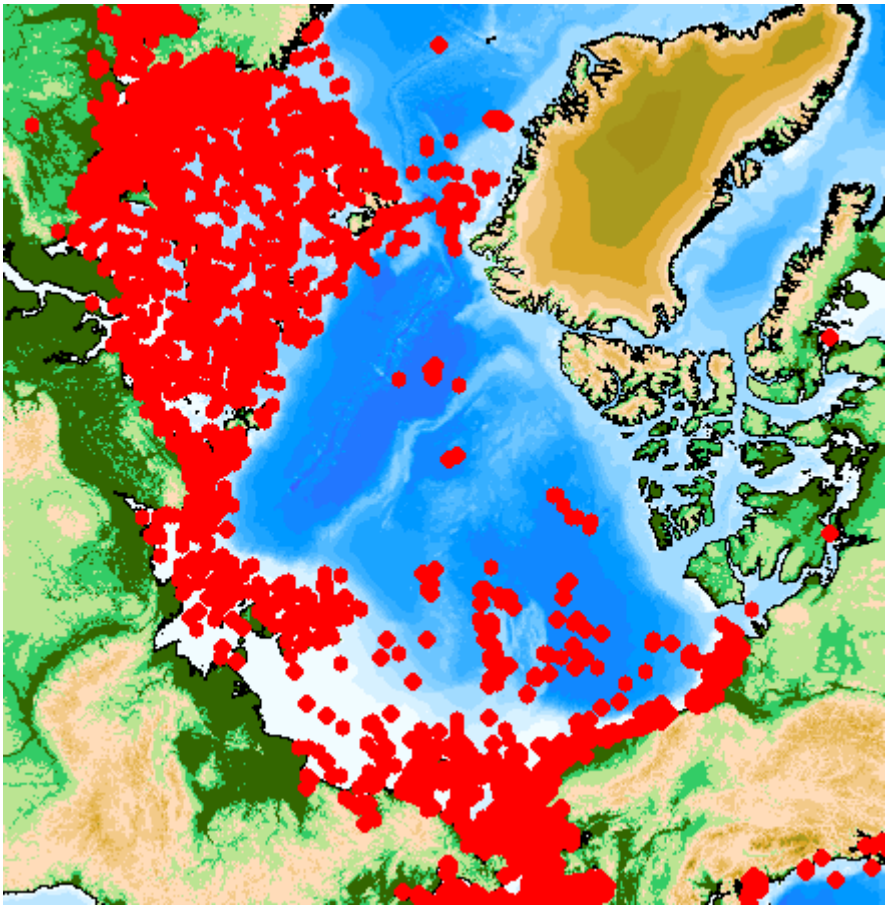


Figure 8-5: Datasets on Arctic species available through ArcOD, indicating the discrepancy between studies in Canadian waters (right side) compared to other areas of the Arctic Ocean (left side). Image from arcodiv.org/Database/Data_overview.html; ArcOD 2022.

8.3.3.2 Independent Verification

Following literature review, specimens that were flagged as requiring closer examination underwent secondary taxonomic review by Biologica and were sent for independent verification to the Benthic Ecology Lab at Université Laval (Laval) and specialists in specific taxonomic groups at the National Scientific Center of Marine Biology at the Far Eastern Branch of the Russian Academy of Sciences, EcoAnalysts Inc. and Columbia Science. Laboratory methods are provided in Appendices 8A-3 and 8D-3. Samples were sent for independent verification for a number of reasons, including possible NIS/AIS status, existence of a new species description, limited information on the distribution, or uncertainty on the identification; in other words, not all species sent for independent verification were flagged as being of concern as potential non-indigenous or invasive species.

8.3.4 Quality Management

8.3.4.1 Field QA/QC

The same field QA/QC procedures were used during benthic infauna collection (Chapter 4.0), macroflora and benthic epifauna monitoring (Chapter 5.0), and fish population monitoring (Chapter 6.0) for the NIS/AIS Program as those used for the MEEMP. These methods are discussed in their respective chapters. QA/QC procedure for samples collected for DNA analysis followed the procedure for benthic infauna collection (Chapter 4.0).

8.3.4.2 Laboratory and Data Analysis QA/QC

- The same lab QA/QC procedures were used during analysis for benthic infauna (Chapter 4.0), macroflora and benthic epifauna (Chapter 5.0), fish population (Chapter 6.0), and fish health (Chapter 7.0) for the NIS/AIS Program as those used for the MEEMP. These methods are discussed in their respective Chapters.
- Lab QA/QC for independent verifications was dependent on the methodology. Results of DNA barcoding were internally reviewed at the Canadian Centre for DNA Barcoding (Appendix 8D-3).
- Macroflora samples were identified using a combination of morphological and DNA barcoding methods and results were reviewed against each other for consistency.

8.4 Results

8.4.1 Taxonomic Identification

8.4.1.1 Benthic Infauna

Benthic infaunal sampling in 2021 was conducted at 17 stations in Milne Port, yielding a total abundance of 72,441 infaunal organisms representing 266 taxa (Appendix 8A-1, 8A-2). Of these, 16 taxa are considered “new records”, meaning they were not found in previous surveys in Milne Inlet; a list of the new records is presented in Table 8-3, along with a description of the distribution on record. Approximately 19% of the newly recorded taxa were identified to species level, 56% to genus level, and 25% represented the first observations of higher taxonomic levels in Milne Inlet. Incidental taxa were occasionally observed in the benthic samples including parasitic and planktonic specimens; while these were considered for NIS/AIS status in this chapter, they are not included in the taxa counts for the benthic infauna study.

The majority of newly recorded taxa were confirmed to have ranges that included the Canadian Arctic or the Northern Atlantic extending past Greenland and Southern Baffin Island (Table 8-3) while others had very limited descriptions or no description of natural ranges with few georeferenced specimens on record. Ranges were considered to have a high probability of including the Project area if the limited collections on record were georeferenced to Arctic waters or were spread across a wide geographic range that could reasonably include Canadian Arctic waters. To address some of the uncertainty surrounding limited taxonomic descriptions, relevant specimens were sent for independent verification, as described in greater detail in Section 8.4.2 below.

Bryozoans represented the majority of newly recorded taxa in Milne Inlet in 2021. Bryozoan taxa are generally poorly described in the taxonomic literature and may be difficult to resolve taxonomically from collected specimens due to being fragmented during collection. Furthermore, bryozoans are generally associated with hard substrates, and are more abundant and diverse on larger substrates (Centurión and López-Gappa 2011). These substrate types are usually absent or in low abundance in benthic grab samples as cobbles may prevent grab samplers from fully closing causing a loss of sample or reduced sample volume, leading to an underrepresentation of bryozoan and other encrusting taxa in benthic surveys. Notably, the samples where most bryozoans were identified in 2021 generally were those that retained larger volumes of gravel and cobble compared to samples from other stations in Milne Port. The identification of *Stomacrustula pachystega* represents the first bryozoan identified to the species level during surveys in Milne Inlet. New records of taxa in 2021 also included the first taxonomic observations from the Phylum Brachiopoda.

Seven taxa from benthic infauna samples were sent for verification. This included five taxa from the Program Watchlist (*Ampharete petersenae*, *Marenzelleria* sp., *Crassicorophium* sp., *Paramphitrite birulai*, *Pseudofabricia* sp. nr. *aberrans*), one taxon flagged for review (*Tricellaria* sp.), and one taxon (*Diastyloides biplicatus*) flagged for review as part of QA/QC procedures following a transcription error in the lab data. Independent verification procedures are detailed in Section 8.4.2.

Table 8-3: List of Newly Recorded Benthic Infauna Taxa Identified at Milne Inlet in 2021 with Description of Distribution on Record

Phylum Class/Order	Family	Taxon	Description	Distribution Reference
Annelida				
Polychaeta/ Eunicida	Lumbrineridae	*Lumbrineris fauchaldi*	Very poorly described worm species, but the species description is derived from specimens collected in the Canadian Arctic in Davis Strait	1, 11
Clitellata/ Haplotaxida	Naididae	Naididae indet.	Broad family of annelid worms that contains representative species with ranges that include the Canadian Arctic.	1, 2, 3, 4
Arthropoda				
Malacostraca/ Amphipoda	Tryphosidae	*Hippomedon propinqvus*	Amphipod species with broad range on record, including collections from the Canadian Arctic and Baffin Island.	1, 2, 3, 5, 6
Brachiopoda				
-	-	-	Phylum with representative species in the Canadian Arctic.	1, 2, 3, 6, 7, 8, 9, 10
Bryozoa				
Gymnolaemata/ Cheilostomatida	Bitectiporidae	*Schizomavella* sp.	A broadly distributed bryozoan genus with at least one described species that has a distribution that includes the Canadian Arctic, including Baffin Island.	1, 2
Gymnolaemata/ Cheilostomatida	Calloporidae	*Callopora* sp.	A broadly distributed bryozoan genus with at least one described species that has a distribution that includes the Canadian Arctic, including Baffin Island.	1, 2, 8,
Gymnolaemata/ Cheilostomatida	Calloporidae	*Cauloramphus* sp.	A bryozoan genus with limited species descriptions, includes representative specimen collections in the Canadian Arctic.	1, 2, 8,
Gymnolaemata/ Cheilostomatida	Candidae	*Tricellaria* sp.	A bryozoan genus with multiple described species that have distributions that includes the Canadian Arctic. Flagged for review due to representative species on NIS/AIS databases.	2
Gymnolaemata/ Cheilostomatida	Cribrilinidae	*Cribrilina* sp.	A broadly distributed bryozoan genus with at least one described species that has a distribution that includes the Canadian Arctic, including Baffin Island.	1, 2, 6, 8
Gymnolaemata/ Cheilostomatida	Exochellidae	*Escharoides* sp.	A bryozoan genus with at least one described species that has a distribution that includes the Canadian Arctic.	1, 2, 8
Gymnolaemata/ Cheilostomatida	Fatkullinidae	*Stomacrustula pachystega*	A poorly described bryozoan species with a probable distribution that includes Arctic and North Atlantic waters.	1
Gymnolaemata/ Cheilostomatida	Smittinidae	*Pseudoflustra* sp.	A bryozoan genus with at least one described species that has a distribution that includes the Canadian Arctic.	1, 2, 6, 8

Phylum Class/Order	Family	Taxon	Description	Distribution Reference
Gymnolaemata/ Cheilostomatida	Smittinidae	*Smittina* sp.	A bryozoan genus with at least one described species that has a distribution that includes the Canadian Arctic.	1, 2, 6
Gymnolaemata/ Cheilostomatida	-	Schizoporelloidea indet.	A bryozoan superfamily with a global distribution with at least one described species that has a distribution that includes the Canadian Arctic.	1, 8, 10
Cnidaria				
Hydrozoa/Leptothecata	Campanulinidae	*Calycella* sp.	Hydrozoan genus with species largely limited to the northern hemisphere. Includes representative species in the Canadian Arctic, including Baffin Island.	1, 2
Mollusca				
Bivalvia/Galeommatida	Lasaeidae	Lasaeidae indet.	Bivalve family with a global distribution. Includes representative species in the Canadian Arctic, including Baffin Island.	1, 2, 3

Notes: Taxa identified to the lowest practical taxonomic level; *indicates non-unique taxa; indet.= indeterminate (taxa which could not be identified beyond the taxonomic level listed); sp.=species.
Taxa distribution references: 1: WoRMS 2022, 2: GBIF 2022, 3: Cusson 2018, 4: Gagnon and Torgersen 2021, 5: Hopcroft 2019, 6: Miller et al. 2014, 7: Sejr 2009, 8. Goldsmit 2016, 9: DFO 2019, 10: Stewart 2013, 11: Blake 1972.
All taxa cross-referenced with NIS/AIS resources: Fofonoff et al. 2022, ISSG 2022, Rius et al. 2022, Molnar et al. 2008, Casas-Monroy et al. 2014.

8.4.1.2 Macroflora and Benthic Epifauna

A total of 16 distinct macroflora taxa were newly recorded during quadrat surveys in Milne Inlet in 2021, nine of which were identifiable to the species level (Table 8-4). The remaining seven taxa were found to be inexact matches to described taxa. These specimens were given the designation “cf.”, indicating the specimen potentially represented a similar related undescribed genus or species, an undescribed morph or subspecies, or the specimen may be a close match but was lacking the characteristics that would allow for a positive identification. Four of these specimens were further resolved to species level via DNA barcoding.

A literature review was performed for all newly recorded taxa identified in quadrat surveys and all were determined to have ranges that included the Canadian Arctic or the representative taxa had a reasonable probability of having a natural distribution that includes Canadian Arctic waters. Each newly observed taxon was also cross-checked against available databases of marine invasive species and none of the taxa were identified as a globally-recognized invasive species to Arctic waters.

All epifauna and fish taxa observed in quadrat surveys had been observed previously in Milne Inlet and had natural distributions that included the Canadian Arctic. Each taxon was also cross-checked against available global databases of marine invasive species and none of the taxa documented at Milne Port were listed.

No taxa from the Program Watchlist were detected during permanent quadrat surveys and no taxa were flagged for review.

Table 8-4: List of Newly Recorded Macroflora Taxa Identified in Permanent Quadrat Surveys in Milne Inlet, 2021

Phylum Class/Order	Family	Taxa Common Name	Description	Distribution Reference
Chlorophyta				
Ulvophyceae/ Acrosiphoniales	Acrosiphoniaceae	cf. *Spongomorpha aeruginosa*	The comparative species has a broad distribution that includes the Canadian Arctic, with collections from Northern Baffin Island.	1, 2, 3, 4
Ulvophyceae/ Cladophorales	Cladophoraceae	*Rhizoclonium* cf. *riparium*	The comparative species has a broad distribution that includes the Canadian Arctic, with collections from Northern Baffin Island.	1, 2, 3, 4
Ulvophyceae/Cladophorales	Cladophoraceae	*Chaetomorpha melagonium*	Mossy green algae species with a broad distribution, including collections from Baffin Island. DNA analysis was unable to resolve the identification (see Section 8.4.2.1).	1, 2, 4, 5
Ochrophyta				
Phaeophyceae/ Desmarestiales	Desmarestiaceae	*Desmarestia viridis*	Filamentous brown algae species with a broad distribution that includes the Canadian Arctic, with collections from Northern Baffin Island.	1, 2, 3, 4
Phaeophyceae/Desmarestiales	Desmarestiaceae	*Desmarestia aculeata*	Brown algae species with a broad global distribution, including observations from Baffin Island.	1, 2, 4, 5
Phaeophyceae/ Ectocarpales	Acinetosporaceae	*Pylaiella* cf. *varia*	The comparative species has an Arctic distribution. *P. washingtoniensis, P. littoralis,* and an unidentified third species collected from Baffin Island. DNA analysis was unable to resolve the identification (see Section 8.4.2.1).	1, 2, 3, 4
Phaeophyceae/Ectocarpales	Chordariaceae	cf. *Coelocladia arctica*	Poorly described species of brown algae. Collection records indicate non-georeferenced Canadian specimens were collected from Ragged Island. DNA analysis was unable to resolve the identification (see Section 8.4.2.1).	2, 4
Phaeophyceae/Ectocarpales	Chordariaceae	*cf. Dictyosiphon foeniculaceus*	Brown algae species with a broad global distribution, including collections from Baffin Island.	2, 4, 5
Phaeophyceae/ Ectocarpales	Chordariaceae	*Dictyosiphon ekmanii*	Arctic and north Atlantic distributed species. At least one distinct undescribed species of *Dictyosiphon* has been collected from Baffin Island.	1, 2, 3
Phaeophyceae/ Ectocarpales	Chordariaceae	cf. *Trachynema groenlandicum*	Comparative genus is very poorly described. Limited records from Greenland indicate a probable range that would include the Canadian Arctic	1, 2, 3
Phaeophyceae/Ectocarpales	Scytosiphonaceae	cf. *Petalonia*	Brown algae genus with a broad global distribution, including species observations from Baffin Island. DNA analysis was unable to resolve the identification (see Section 8.4.2.1).	1, 2, 4

Phylum Class/Order	Family	Taxa Common Name	Description	Distribution Reference
Rhodophyta				
Florideophyceae Ceramiales	Delesseriaceae	*Phycodrys fimbriata*	Foliose red algae with a distribution record that includes the Canadian Arctic. Sequence data is available from a specimen collected from Baffin Island.	1, 2, 3
Florideophyceae Gigartinales	Phyllophoraceae	*Coccotylus truncatus*	Foliose red algae species with a global distribution including records from the Canadian Arctic and northern Baffin Island. Species confirmed through DNA analysis (see Section 8.4.2.1).	1, 2, 3, 4
Florideophyceae/Ceramiales	Rhodomelaceae	*Savoiea arctica*	Recently proposed taxonomic designation, considered an Arctic and North Atlantic species, with collections from Western Greenland and Baffin Island. DNA analysis was unable to resolve the identification (see Section 8.4.2.1).	2, 7
Florideophyceae/Ceramiales	Rhodomelaceae	cf. *Rhodomela*	Broadly distributed genus of red algae with representative taxa with natural ranges that include the Canadian Arctic. DNA analysis confirmed species as *Rhodomela virgata* (see Section 8.4.2.1)	1, 2, 4, 5, 6
Florideophyceae/Gigartinales	Dumontiaceae	*Dilsea socialis*	Red algae with a broad distribution, including collections from Baffin Island.	1, 2, 4

Notes: Taxa identified to the lowest practical taxonomic level; indet.= indeterminate (taxa could not be identified beyond the taxonomic level listed); sp.=species; cf.=compare with (taxa is an inexact match to the designated taxa.

Taxa distribution references: 1: WoRMS 2022, 2: GBIF 2022, 3: AlgaeBase 2022, 4: Küpper et al. 2016, 5. Ellis and Wilce 1961, 6: Brown et al. 2011, 7: Wynne 2018.

All taxa cross-referenced with NIS/AIS resources: Fofonoff et al. 2022, ISSG 2022, Rius et al. 2022, Molnar et al. 2008, Casas-Monroy et al. 2014.

8.4.1.3 Settlement Substrates

Nine settlement baskets and eighteen plates were recovered from stations throughout Milne Port. During recovery of the substrates, the station at quadrat 2 was unable to be located and therefore a settlement plate was not recovered from this station. Taxonomic data of encrusting taxa collected from settlement and recruitment monitoring stations in Milne Port are presented in Appendix 8C-1 and 8C-2. Recruitment on the settlement substrates was low, which was expected following one year of deployment based on previous surveys in Milne Inlet (Golder 2020b).

Figure 8-6: a) Settlement Plate Collected from the Centre-D Station on the Freight Dock and b) Rocks from Settlement Basket collected from the West-M Station on the Freight Dock, following One Year Deployment (14 and 15 August 2021)

A list of newly recorded (i.e., not encountered in previous surveys, thus not listed in Milne Inlet Taxonomic Inventory) encrusting taxa is provided in Table 8-5 along with a brief description of the known geographic distribution of each taxon. Of the 98 taxa identified in samples collected in 2021, fifteen had not been previously observed (Table 8-5). Three taxa were identified to species level and seven were only identifiable to genus level. Each newly observed taxon was cross-checked against a global database of marine invasive species and none of the taxa were identified as a globally-recognized invasive species (Molnar et al. 2008) or a potential invasive species in Canada according to the National Risk Assessment for Introduction of Aquatic Nonindigenous Species to Canada by Ballast Water (Casas-Monroy et al. 2014). In addition to these databases, each new taxon was researched independently in the literature for their known habitats and distributions for signs of taxa that may be considered non-native to the Arctic region.

Three taxa from the Program Watchlist were identified on settlement substrates (*Marenzelleria* sp., *Crassicorophium* sp., *Monocorophium insidiosum*), these are detailed in Section 8.4.2 Independent Verifications. No newly recorded taxa on the settlement substrates were flagged for independent review.

Table 8-5: Newly Observed Taxa from Settlement Substrate Deployments in Milne Inlet, 2021

Phylum Class/Order	Family	Taxa	Description	Distribution Reference
Bryozoa				
Stenolaemata/ Cyclostomatida	Lichenoporidae	*Lichenopora* sp.	Bryozoan genus with a limited collection record that includes the Canadian Arctic	1, 2, 3, 4
Chlorophyta				
Ulvophyceae/ Acrosiphoniales	Acrosiphoniaceae	*Spongomorpha aerugi nosa*	Broadly distributed algae species, including collections from the Canadian Arctic and Baffin Island	1, 2
Ulvophyceae/ Cladophorales	Cladophoraceae	*Rhizoclonium* sp.	Green algae species with a limited collection record. Records include Canadian Arctic specimens.	2
Ulvophyceae/ Ulotrichales	Ulotrichaceae	*Ulothrix* sp.	Green algae species with a broad range that includes the Canadian Arctic and Baffin Island	2
Ulvophyceae/ Ulotrichales	Ulotrichaceae	Ulotrichaceae indet.	Globally distributed green algae family with representative species with ranges that include the Canadian Arctic	1, 2
Ulvophyceae/ Ulvales	Ulvaceae	*Ulva* cf. *prolifera*	Comparative taxon is a globally distributed species, including subspecies with ranges that include the Canadian Arctic and Baffin Island.	1, 2
Ciliophora				
-/-	-	Ciliophora indet.	Phylum with a broad, global distribution	1, 2, 5
Cnidaria				
Hydrozoa/ Anthoathecata	Corynidae	*Sarsia* sp.	Globally distributed genus with representative species with ranges that include the Canadian Arctic	1, 2, 3, 5
Echinodermata				
Asteroidea/ Forcipulatida	Asteriidae	*Leptasterias* (*Leptasterias*) *muelleri*	Seastar species with a broad distribution that includes the Canadian Arctic and Davis Strait	1, 2
Foraminifera				
-/-	-	Foraminifera indet.	Phylum with a broad, global distribution	1, 2, 4, 5, 6
Mollusca				
Bivalvia/ Mytilida	Mytilidae	*Arvella faba*	Updated name for *Crenella faba*, which has a range that includes the Canadian Arctic	1, 2, 3, 7

Phylum Class/Order	Family	Taxa	Description	Distribution Reference
Gastropoda/ Nudibranchia	Dendronotidae	*Dendronotus* sp.	Broadly distributed genus with at least one species with a range that includes the Canadian Arctic	1, 2, 3, 5
Ochrophyta				
Phaeophyceae/ Ectocarpales	Acinetosporaceae	*Pylaiella* cf. *varia*	The comparative species has an Arctic distribution. *P. washingtoniensis, P. littoralis,* and an unidentified third species collected from Baffin Island.	1, 2, 8, 9
Phaeophyceae/ Ectocarpales	Chordariaceae	cf. *Trachynema groenlandicum*	Comparative genus is very poorly described. Limited records from Greenland indicate a probable range that would include the Canadian Arctic	1, 2, 9
Phaeophyceae/ Ectocarpales	Chordariaceae	Chordariaceae indet.	Broadly distributed brown algae family, including records in the Canadian Arctic and Baffin Island	2, 9

Notes: Taxa identified to the lowest practical taxonomic level; indet.= indeterminate (taxa could not be identified beyond the taxonomic level listed); sp.=species; cf.=compare with (taxa is an inexact match to the designated taxa.

Taxa distribution references: 1: WoRMS 2022, 2: GBIF 2022, 3: Miller et al. 2014, 4: Goldsmit 2016, 5: Stewart 2013, 6: Stewart et al. 1985, 7: Cusson 2018, 8: Küpper et al. 2016, 9: AlgaeBase 2022.

All taxa cross-referenced with NIS/AIS resources: Fofonoff et al. 2022, ISSG 2022, Rius et al. 2022, Molnar et al. 2008, Casas-Monroy et al. 2014.

8.4.1.4 Fish and Incidentals

Throughout surveys at Milne Inlet, some species are targeted and caught intentionally (such as fish as part of fish health and population chapters; collected for and reported in Chapters 6.0 and 7.0) while others are collected or observed incidentally. In 2021 MEEMP and offset habitat monitoring surveys, 96 taxa were collected or observed incidentally and of these, ten taxa were newly recorded in MEEMP surveys (Table 8-6). The full list of incidental taxa is available in Appendix 8B-1, laboratory results are in Appendices 8B-2, 8B-3, and 8B-4.

All taxa observed or caught incidentally in MEEMP and NIS/AIS surveys were cross-checked against a global database of marine invasive species and none of the taxa were identified as a globally-recognized invasive species (Molnar et al. 2008) or an invasive species in Canada according to the National Risk Assessment for Introduction of Aquatic Nonindigenous Species to Canada by Ballast Water (Casas-Monroy et al. 2014). In addition to these databases, each taxon was researched independently in the literature for their known habitats and distributions for signs of taxa that may be considered non-native to the Arctic region. For taxa that were not identified to the species level, it was confirmed that the identified higher-level taxa had at least one representative species with a distribution that included Arctic waters.

No taxa from the Program watchlist were identified during permanent quadrat surveys and no taxa were flagged for review.

Table 8-6: Newly Recorded Incidental Macroflora and Fauna Taxa Identified in Milne Inlet in 2021

Phylum Class/Order	Family	Taxa	Description	Distribution Reference
Arthropoda				
Insecta/Diptera	Chironomidae	*Hydrobaenus* sp.	Freshwater chironomid taxa with a global distribution, including records from the Canadian Arctic	2
Insecta/Diptera	Simuliidae	Simuliidae indet.	Freshwater dipteran taxa with a global distribution, including records from the Canadian Arctic	2, 3
Insecta/Diptera	Tipulidae	Tipulidae indet.	Freshwater dipteran taxa with a global distribution, including records from the Canadian Arctic	2, 3
Insecta/Ephemeroptera	-	Ephemeroptera indet.	Freshwater taxa with a global distribution, including records from the Canadian Arctic	2, 3
Brachiopoda				
-/-	-	-	Phylum with representative species in the Canadian Arctic. Also observed in benthic samples for the first time.	1, 2, 3, 4, 5, 6, 7, 8
Chlorophyta				
Ulvophyceae/Ulotrichales	Ulotrichaceae	cf. *Urospora neglecta*	The comparative species is poorly described. The limited specimen collections are from a broad geographical range, including North Atlantic and Arctic waters.	1, 2, 9, 10
Chordata				
Actinopterygii/Perciformes	Agonidae	*Aspidophoroides olrikii*	Arctic Alligatorfish, a fish species with a broad circumarctic and North American distribution, including collections around Baffin Island.	1, 2, 3, 5, 7
Actinopterygii/Perciformes	Agonidae	*Leptagonus decagonus*	Atlantic Poacher, a fish species with a broad circumarctic and North American distribution.	1, 2, 3, 5, 7
Actinopterygii/Perciformes	Cottidae	*Triglops pingelii*	Ribbed Sculpin, a fish species with a broad circumarctic and North American distribution, including collections from Baffin Island.	1, 2, 3, 5, 7
Actinopterygii/Perciformes	Cyclopteridae	*Eumicrotremus spinosus*	Atlantic Spiny Lumpsucker, an eastern Canadian Arctic fish species with multiple records of occurrence around Baffin Island	1, 2, 5, 7

Notes: Taxa identified to the lowest practical taxonomic level; indet.= indeterminate (taxa which could not be identified beyond the taxonomic level listed); sp.=species.

Taxa distribution references: 1: WoRMS 2022, 2: GBIF 2022, 3: Stewart 2013, 4: Sejr 2009, 5: Miller et al. 2014, 6: Goldsmit 2016, 7: DFO 2019, 8: Cusson 2018, 9: Saunders 2022, 10: Brown et al. 2011

All taxa cross-referenced with NIS/AIS resources: Fofonoff et al. 2022, ISSG 2022, Rius et al. 2022, Molnar et al. 2008, Casas-Monroy et al. 2014.

8.4.2 Independent Verification and Identifications

The majority of observed taxa in 2021 surveys are known to occur in Arctic habitats or have representative species with Arctic distributions; however, during the 2021 NIS/AIS survey program, a number of taxa were flagged as potentially non-indigenous to the region or to Arctic waters, or as present on the program Watchlist for potential NIS/AIS taxa. It is important to note that fauna and flora of the Canadian Arctic are not thoroughly described, as marine surveys have not been exhaustive, particularly in comparison to other Arctic regions. Distribution records for many species are incomplete or not documented. Therefore, it is possible that a species with a range on record that does not include a Canadian Arctic distribution may represent a first observation within a native range and not the introduction of a non-native species. It is also possible that new or poorly described species have been detected.

Nineteen (19) taxa were flagged for review in 2021, due to concerns regarding possible NIS/AIS status, presence on the program Watchlist, limited descriptions of geographic range, to gain clarity or confirmation of uncertain identifications, or as part of QA/QC procedures (Table 8-7). Table 8-9. Flagged taxa underwent secondary taxonomic review by Biologica prior to being forwarded to specialists for a secondary morphological assessment as part of independent verification procedures. Independent verifications of the samples were made by Philippe Archambault's Benthic Ecology Lab at Université Laval (Laval; Quebec). Samples were also sent for verification where new species descriptions[1] existed or there was uncertainty on the identification, whether or not the species are of concern as potential NIS or AIS. A record of specimens sent for verification is included in Appendix 8E-1. A complete record of flagged taxa observations in 2021 and their risk statuses is available in Appendix 8F-1. Results of independent review are summarized in Table 8-9, however, the results of some of the morphological assessments have not been received as of October 2022. Results of the remaining morphological assessments will be provided in the 2022 MEEMP report.

Table 8-7: Record of Taxa sent for Independent Morphological Assessment, 2021

Phylum Class/Order	Family	Putative Taxa	Reason for Review
Annelida			
Polychaeta/ Sabellida	Fabriciidae	*Pseudofabricia* sp. nr. *aberrans*	On the Watchlist. Limited records indicate species may be endemic to Mediterranean. Independent identification by Laval as *Manayunkia aesturiana* in 2018 and as *Fabricia stellaris* in 2019 and 2020 were not accepted by Biologica and other specialists due to morphological and ecological differences.
Polychaeta/ Spionida	Spionidae	*Marenzelleria* sp.	On the Watchlist. Genus contains species of concern due to being listed as AIS taxa in northern European waters. Review of Milne Port specimens by a specialist indicated multiple species with Arctic ranges may be present in Milne Inlet. Morphological similarities between species confound identifications, requiring the input of specialists in the genus.

[1] New species descriptions occur when an update to the taxonomic record is accepted, this may be due to a variety of reasons including acceptance of a more senior description, DNA analysis combining or separating species descriptions, or the identification of features that match a different taxonomic group.

Phylum Class/Order	Family	Putative Taxa	Reason for Review
Polychaeta/ Terebellida	Ampharetidae	*Ampharete petersenae*	On the Watchlist. Recently described, data poor species described from Arctic waters near western Greenland and Iceland, although no range is described. Flagged for review against any new or updated species descriptions.
Polychaeta/ Terebellida	Terebellidae	*Paramphitrite birulai*	On the Watchlist. Limited taxonomic record with no described range. Indications the range could include the Canadian Arctic. Record of NIS status in the Mediterranean. Flagged for review against any new or updated species descriptions.
Arthropoda			
Malacostraca/ Cumacea	Diastylidae	*Diastyloides biplicatus*	Cumacean species from the Canadian Arctic, previously observed in MEEMP surveys, incorrectly transcribed as a Pacific species. Sent for verification as part of QA/QC procedures.
Malacostraca/ Amphipoda	Corophiidae	*Crassicorophium* sp.	On the Watchlist. Observed during baseline studies in Milne Port in 2013. On program Watchlist due to presence on AIS species databases.
Bryozoa			
Gymnolaemata/ Cheilostomatida	Candidae	*Tricellaria* sp.	Genus of bryozoans that includes more than one species with a natural range that includes the Eastern Canadian Arctic. Flagged for review due to *T. inopinata*, being listed on the National Risk Assessment as a potential invader to Canadian waters, including the Arctic region.
Chlorophyta			
Ulvophyceae/Cladophorales	Cladophoraceae	*Chaetomorpha melagonium*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.
Ulvophyceae/Ulotrichales	Ulotrichaceae	cf. *Urospora neglecta*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.
Ochrophyta			
Phaeophyceae/ Desmarestiales	Desmarestiaceae	*Desmarestia viridis*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.
Phaeophyceae/Desmarestiales	Desmarestiaceae	*Desmarestia aculeata*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.
Phaeophyceae/ Ectocarpales	Acinetosporaceae	*Pylaiella* cf. *varia*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.

Phylum Class/Order	Family	Putative Taxa	Reason for Review
Phaeophyceae/Ectocarpales	Chordariaceae	cf. *Coelocladia arctica*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.
Phaeophyceae/Ectocarpales	Chordariaceae	*cf. Dictyosiphon foeniculaceus*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.
Phaeophyceae/Ectocarpales	Scytosiphonaceae	cf. *Petalonia*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.
Rhodophyta			
Florideophyceae Gigartinales	Phyllophoraceae	*Coccotylus truncatus*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.
Florideophyceae/Ceramiales	Rhodomelaceae	*Savoiea arctica*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.
Florideophyceae/Ceramiales	Rhodomelaceae	cf. *Rhodomela*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.
Florideophyceae/Gigartinales	Dumontiaceae	*Dilsea socialis*	Macroflora systematics and identifications are difficult to confirm in the field, therefore macroflora samples were both morphologically and DNA sequenced to verify results.

8.4.2.1 DNA Analysis

As part of independent verification and identification of taxa, additional specimens were collected for genetic analysis at the Canadian Centre for DNA Barcoding. Benthic infauna samples for DNA analysis were collected from nine stations where flagged taxa were observed in previous surveys (e.g., *Marenzelleria viridis, Monocorophium insidiosum*). A total of 168 taxa were identified in benthic samples collected for DNA. All taxa had been observed previously in Milne Inlet surveys. A complete list of taxa identified in DNA samples is presented in Appendix 8D-1

The samples contained three taxa from the Watchlist (*M. viridis*, *C. bonelli*, and *P.* sp. nr. *aberrans*, Table 8-8). Four stations targeted for sampling did not have any flagged taxa. No specimens of *Monocorophium* sp. were documented, despite targeted efforts at stations where this taxon has been previously observed.

One adult specimen was tentatively identified as *Pseudofabricia aberrans*, a taxon that has a limited range on record. Independent verifications in previous years were largely inconclusive or were not agreed upon under review. While no sequencing is known to have been performed for the genus *Pseudofabricia,* records do exist for at least one of the potential alternative identifications (*Fabricia stellaris*) in addition to other species in the family Fabriciidae. The specimen was therefore sent for DNA barcoding along with samples from 2020, to gain clarity on

the identification. Results were inconclusive (Table 8-9). The specimens did not match available sequences for *Fabricia stellaris*, excluding this species as a potential identification for the specimens; however, there were no close matches to any sequences on record. DNA results placed the unidentified specimens within the Family Fabriciidae.

Fifteen specimens identified as *Marenzelleria* sp. were collected at three of the five stations where it has been observed previously (Table 8-8). Specimens represented a mix of adult and intermediate life stages. Four specimens were damaged and only the anterior portion was present. All specimens, including the damaged ones, were sent for DNA barcoding. DNA results based on molecular analysis of four genes conclusively identified the specimens as *Marenzelleria wireni* (Table 8-9, Radashevsky 2022, pers. comm.). A formalized laboratory report on the molecular identification is pending.

Five specimens identified as *Crassicorophium bonelli* were collected at two stations. *C. bonelli* is not a taxon of concern, in terms of being introduced by Project shipping, as it was found at Milne Port during baseline surveys. However, this genus is on the Watchlist due to concerns about the range on record for other *Crassicorophium* species and similarities to the flagged genus *Monocorophium* (also found in baseline surveys at Milne Port). There were no exact matches to existing barcodes on record for the sequenced *Crassicorophium* specimens (Table 8-9): they were not grouped with known specimens of *Monocorophium* or *Crassicorophium*, and were closer matches to specimens from the genus *Corophium.* The closest match to existing sequences were to unidentified amphipod specimens collected from the Canadian Arctic in Nunavut, which have been suggested to be *Crassicorophium clarencense* (MacDonald 2022c, Pers.Comm.).

DNA barcoding was successful in confirming six macroflora species that had previously been identified with a "cf." designation, while two specimens were only identified to genus or family. Four specimens failed to generate readable sequences (see Table 8-9 for a comparison of morphological and DNA identification results).

Table 8-8: Target or Flagged Taxa Collected at Benthic Stations Sampled for DNA Barcoding

Station	Target or Flagged Taxa Collected (Putative Identifications)	Number of Specimens
SW-2	*Marenzelleria* sp.	2
SW-6	-	-
SW-11	*Crassicorophium bonelli*	3
SW-12	*Marenzelleria* sp.	10*
SW-13	*Crassicorophium bonelli*	2
	Marenzelleria sp.	3
SW-14	-	-
SE-2	-	-
SE-4	-	-
SNE-7	*Pseudofabricia* sp. nr. *aberrans*	1

* Four specimens were damaged and incomplete, but were suitable for DNA analysis

Table 8-9: Record of Results of Independent Review and DNA Barcoding of Taxa Collected in Milne Port, 2021.

Biologica's Identification	Verification Method	Result of Verification	Description	Reference
Annelida				
Pseudofabricia sp. nr. *aberrans*	DNA	No match, Family Fabriciidae	DNA results indicate the specimens are not *Fabricia stellaris* and do not match any sequences on record. Based on available information, there is a reasonable probability these specimens are from a currently undescribed species in the family Fabriciidae.	1, 2, 3
Marenzelleria sp.	DNA	*Marenzelleria wireni*	Species confirmed through DNA analysis; a formal report is being prepared by the analytical laboratory. *M. wireni* is understudied compared to other members of the genus; however, it is established to be a native Arctic species and the limited georeferenced collection records indicate range is extremely broad, and likely is circumpolar, including the North American arctic.	1, 2, 4
Ampharete petersenae	Morphological Assessment	TBD	TBD	
Paramphitrite birulai	Morphological Assessment	TBD	TBD	
Arthropoda				
Diastyloides biplicatus	Morphological Assessment	*Diastylis* sp.	Morphologically similar taxa, *Diastylis* and *Diastyloides* are not well differentiated in the available taxonomic literature. Multiple *Diastylis* species have ranges that include the Canadian Arctic, and have previously been observed in Milne Port surveys.	1, 2, 12
Crassicorophium sp.	DNA and Morphological Assessment	DNA: No match, Corophiidae indet. Morphological Assessment: *Crassicorophium clarencense*	DNA results indicate the specimens do not match sequences available for *Monocorophium* nor *Crassicorophium*. The specimens most closely matched the genus *Corophium*; however, the match was only 83.76% similar where a minimum 95% similarity is required to confirm an identification. This means the specimens are also unlikely to be from *Corophium*. The closest sequence match was to unidentified Amphipoda specimens collected from the Canadian Arctic in Nunavut (Victoria Island) that are presumed to be *Crassicorophium clarencense*, which is a Canadian Arctic species. Independent morphological assessment confirmed the identification as *C. clarencense.*	1, 2, 3, 12
Bryozoa				
Tricellaria sp.	Morphological Assessment	Candidae indet.	Unable to be differentiated from *Scrupocellaria* sp. due to the size of the specimen. Recommended the identification be brought to the Family level. Bryozoans of the family Candidae, including *Scrupocellaria* sp., have ranges that include the Canadian Arctic and have previously been observed in Milne Port surveys	1, 2, 12

Biologica's Identification	Verification Method	Result of Verification	Description	Reference
Chlorophyta				
Chaetomorpha melagonium	DNA	Failed	Failed to generate readable sequences. Mossy green algae species with a broad distribution, including collections from Baffin Island.	1, 2, 5, 6, 7
cf. *Urospora neglecta*	DNA	*Urospora neglecta*	99.86% match to multiple records representing the species. The comparative species is poorly described. The limited specimen collections are from a broad geographical range, including Arctic and North Atlantic waters.	5, 8
Ochrophyta				
Desmarestia aculeata or *Dictyosiphon foeniculaceus*	DNA	*Desmarestia aculeata*	100% match to multiple records representing the species. Brown algae species with a broad global distribution, including observations from Baffin Island.	5, 6, 7
cf. *Desmarestia viridis*	DNA	Genus *Desmarestia*	94.09% match to multiple records representing the species *Desmarestia viridis* from Alaska, USA, and New Brunswick and British Columbia, Canada, however only genus level can be established. Brown algae species with a broad global distribution, including observations from Baffin Island.	5, 6, 7, 9
cf. *Dictyosiphon foeniculaceus*	DNA	*Dictyosiphon foeniculaceus*	100% match to multiple records representing the species. Brown algae species with a broad global distribution, including collections from Baffin Island.	2, 5, 6, 7
Pylaiella cf. *varia*	DNA	Family Acinetosporacea	99.69% match to a record that had only been identified to Family. The comparative species has an Arctic distribution. *P. washingtoniensis, P. littoralis,* and an unidentified third species collected from Baffin Island.	2, 4, 5, 9
cf. *Coelocladia arctica*	DNA	Failed	Failed to generate readable sequences. Poorly described species of brown algae. Collection records indicate non-georeferenced Canadian specimens were collected from Ragged Island.	2, 5, 6
cf. *Petalonia* or other Brown algae	DNA	Failed	Failed to generate readable sequences. Brown algae genus with a broad global distribution, including species observations from Baffin Island.	1, 2, 5, 6
Rhodophyta				
Coccotylus truncatus	DNA	*Coccotylus truncatus*	100% match to a record representing the species. Foliose red algae species with a global distribution including records from the Canadian Arctic and northern Baffin Island.	1, 2, 5, 6, 9
Savoiea arctica	DNA	Failed	Failed to generate readable sequences. Recently proposed taxonomic designation, considered an Arctic and North Atlantic species, with collections from Western Greenland and Baffin Island.	2, 5. 10
cf. *Rhodomela*	DNA	*Rhodomela virgata*	100% match to multiple records spanning the Canadian Arctic representing the species. Broadly distributed genus of red algae with representative taxa with natural ranges that include the Canadian Arctic.	1, 2, 5, 6, 7, 11

Biologica's Identification	Verification Method	Result of Verification	Description	Reference
Dilsea socialis	DNA	*Dilsea socialis*	100% match to a record representing the species. Red algae with a broad distribution, including collections from Baffin Island.	1, 2, 5, 6

Taxa distribution references: 1: WoRMS 2022, 2: GBIF 2022, 3:,MacDonald 2022c, pers. comm. 4: Radashevsky 2022, pers. comm, 5: BOLD, 6: Küpper et al. 2016, 7: Ellis and Wilce 1961, 8: Saunders 2022, 9: AlgaeBase 2022, 10: Wynne 2018, 11: Brown et al. 2011, 12: MacDonald 2022d, pers. comm.

8.5 Discussion

8.5.1 Limitations

It is important to note that it is not always possible to identify specimens to the species level due to a variety of limitations. Species descriptions are often based on adult samples, and immature specimens may lack the features present in the adult that are required for specific identification (Steinerstauch 2019, pers. comm.). Fragmented samples, or samples damaged during collection, may also be missing identifying features that would be used to determine species. Incomplete species records and descriptions also lead to limitations in species identification (Steinerstauch 2019, pers. comm.). Where taxa were not identifiable to the species level, it was confirmed that the higher taxonomic designation included at least one species with a probable native range that included the Project area.

Identification resolution may be dependent also on the number of individual specimens of the same type that are collected. This is for two general reasons: first, higher incidence of a type of specimen often translates to a higher incidence of specimens with diagnostic characters, and thus higher identification resolution; and second, the increase in incidence of identifiable taxa allows for more distinctions to be made about like and unlike taxa. For example, with bryozoans, a single incidence of a small colony or fragment observed in a sample is less likely to be identified to genus than it would be in a sample with a high incidence, in which opportunities to compare and contrast morphologies are greater (MacDonald 2022a, pers. comm.)

Ranges on record are not complete for all taxa; recently described or uncommon taxa may have a limited range description based on where specimens have been found, with a broader range inferred based on biological characteristics and tolerances. However, with some taxa it can be difficult to determine if a species is originally from the area in which it is found, or if it was introduced from another location. In cases where the original native range cannot be conclusively determined a species is considered cryptogenic.

Flora and fauna of the Canadian Arctic are not thoroughly described and surveys of species in the Canadian Arctic are severely lacking relative to surveys in other Arctic and sub-Arctic regions, particularly in comparison to surveys in Northern Europe. Surveys in the Canadian Arctic are also frequently limited by methodology, focussing on methods such as benthic grabs and zooplankton tows that do not sample the biota of larger hard substrates. Encrusting taxa such as bryozoans and some tunicate species may therefore be underrepresented in the datasets. Both of these factors reduce confidence in the ranges on record, particularly for less common or recently described species that may be distributed within a broader area, but due to their rarity and the relative survey effort, have not yet been described from that broader range.

Difficulties in determining the historic range of a species may also be related to changes or inconsistencies in a species description. The range on record may be linked to a previous name or description and databases are not always updated as new descriptions are accepted. Alternatively, multiple conflicting descriptions or names for the

same taxa may further confound records. New species descriptions occur when an update to the taxonomic record is accepted. This may be due to a variety of reasons including acceptance of a more senior description, DNA analysis combining (two species merging under one species name) or separating species descriptions (one species being divided into two distinct species or subspecies), or reclassification due to the identification of features that match a different taxonomic group (such as reclassification to a new genus or being considered a subspecies). These limitations may be more pronounced in certain taxonomic groups such as bryozoans and marine algae (i.e. macroflora) where there are fewer experts focussed on refining the taxonomy or more variation in reporting relative to other more well-defined groups.

The accurate identification of macroalgae by genetic means requires reliable, accurate reference sequences in a publicly accessible database. Currently, there are some barriers slowing the process of populating reference databases such as the Barcode of Life Database (BOLD). First, obtaining quality DNA sequences reliably can be difficult. Macroalgae are a diverse taxonomic group, and many taxa require specialized extraction protocols and primer design. Thus, an industrial-scale approach to DNA sequencing (e.g., DNA barcoding as per the Canadian Centre for DNA Barcoding) may not always be successful. The second barrier to progress is that once the sequences are obtained, like with any other taxonomic group, the rigour of the original identification for reference specimens must be considered, as can often be misleading due to the limitations of morphological identifications, as discussed earlier. Therefore, improvement is an iterative process, with understanding of algal molecular and morphological diversity developing hand in hand (MacDonald 2022a, pers. comm.).

Availability of publications may further impact descriptions, more recently published works may not be readily available or accepted by the larger taxonomic community, and updates may not be reflected in the identification keys used by the taxonomy labs.

8.5.2 Taxonomic Identification

8.5.2.1 Benthic Infauna

In 2021, benthic community analysis was not required as part of MEEMP surveys. A subset of the benthic infauna stations was sampled in support of NIS/AIS monitoring, focusing on stations surrounding Project infrastructure or where flagged taxa had previously been detected. A total of 266 taxa were identified in 17 benthic samples in Milne Inlet, including 16 taxa which had not been recorded in the Project area. An analysis of the available literature indicated all but one of the new records had clearly described ranges or collection records that included Arctic waters or were north Atlantic species with unknown northern limits that presumably could extend into the Canadian Arctic. Results for the taxon sent for independent verification are discussed in Section 8.5.3 and the others are listed below:

- *Lumbrineris fauchaldi* is a very poorly described species of polychaete worm. However, the original species description is derived from specimens collected in Davis Strait near Baffin Island, indicating the natural range likely includes the Project Area (WoRMS 2022).
  - ***Lumbrineris fauchaldi* is not considered a taxon of concern in Milne Port**
- Naididae is a broad family of Clitellatan worms that contains species that have distributions that include the Canadian Arctic (WoRMS 2022). Twelve species (from six separate genera and four subfamilies) are listed as potentially alien or cryptogenic, although none to Arctic waters (Rius et al. 2022).
  - **Naididae indet. is not considered a taxon of concern in Milne Port**

- *Hippomedon propinqvus* is an amphipod species with a broad range on record (WoRMS 2022, GBIF 2022). Specimen collections in the Canadian Arctic in the vicinity of the project are recorded under a misspelling of the species name (*propinquus*; Miller et al. 2014, Hopcroft 2019, Cusson 2018).
  - ***Hippomedon propinqvus* is not considered a taxon of concern in Milne Port**
- Brachiopoda is a broad phylum with a global distribution (WoRMS 2022, GBIF 2022). While there is at least one recorded alien species within this Phylum (Rius et al. 2022), there are many species with natural ranges that include the Project Area.
  - **Brachiopoda indet. is not considered a taxon of concern in Milne Port**
- *Schizomavella* is a bryozoan genus that includes at least one representative species with a natural range that include the Canadian Arctic around Baffin Island (GBIF 2022).
  - ***Schizomavella* sp. is not considered a taxon of concern in Milne Port**
- *Callopora* is a bryozoan genus that includes at least one representative species with a natural range that include the Canadian Arctic around Baffin Island (WoRMS 2022, GBIF 2022, Goldsmit 2016). At least two species are listed as potentially alien (to Hawai'i and the South China Sea, Rius et al. 2022).
  - ***Callopora* sp. is not considered a taxon of concern in Milne Port**
- *Cauloramphus* is a relatively poorly described bryozoan genus. However, collections include specimens from the eastern Canadian Arctic (WoRMS 2022, GBIF 2022, Goldsmit 2016). At least one species within the genus is listed as a potentially alien taxon to the north Pacific (Rius et al. 2022).
  - ***Cauloramphus* sp. is not considered a taxon of concern in Milne Port**
- *Tricellaria* is a genus of bryozoans that includes more than one species with a natural range that includes the Eastern Canadian Arctic. The genus also includes species listed on databases as alien, including *T. inopinata*, listed on the National Risk Assessment as a potential invader to Canadian waters, including the Arctic region (Casas-Monroy et al. 2014).
  - ***Tricellaria* sp. was flagged for independent review (see Section 8.5.3.3.1).**
- *Cribrilina* is a genus of bryozoans with representative species from the Eastern Canadian Arctic, including Baffin Island (WoRMS 2022, GBIF 2022, Miller et al. 2014, Goldsmit 2016).
  - ***Cribrilina* sp. is not considered a taxon of concern in Milne Port**
- *Escharoides* is a genus of bryozoans with representative collections in the Eastern Canadian Arctic (WoRMS 2022, GBIF 2022, Goldsmit 2016).
  - ***Escharoides* sp. is not considered a taxon of concern in Milne Port.**
- *Stomacrustula pachystega* is a poorly described species of bryozoan with few georeferenced collections. It is considered to have a probable range that includes the Arctic Ocean and the Northwestern Atlantic (WoRMS 2022).
  - ***Stomacrustula pachystega* is not considered a taxon of concern in Milne Port.**
- *Pseudoflustra* is a bryozoan genus largely limited to Arctic waters. Collection records indicate at least one species has a range that includes the eastern Canadian Arctic (WoRMS 2022, GBIF 2022).

- **_Pseudoflustra_ sp. is not considered a taxon of concern in Milne Port**.

- *Smittina* is a genus of bryozoans with a broad global distribution that includes the Canadian Arctic (WoRMS 2022, GBIF 2022). Representative collections have been made in the Eastern Canadian Arctic around Baffin Island (Miller et al. 2014).
  - **_Smittina_ sp. is not considered a taxon of concern for Milne Port.**
- Schizoporelloidea is a superfamily of bryozoans with a global distribution. Representative taxa are present in the Canadian Arctic (WoRMS 2022, Goldsmit 2016, Stewart 2013). Some taxa are included on lists of potentially alien taxa, although this includes species with natural ranges that include the Canadian Arctic (Rius et al. 2022).
  - **Schizoporelloidea indet. is not considered a taxon of concern in Milne Port**
- *Calycella* is a genus of hydrozoans that is largely limited to the northern hemisphere. At least one representative species has a natural range that includes the Canadian Arctic and Baffin Island (WoRMS 2022, GBIF 2022, Calder 2015).
  - **_Calycella_ sp. is not considered a taxon of concern in Milne Port.**
- Lasaeidae is a bivalve family with a broad distribution, including representative taxa in the Canadian Arctic and Baffin Island (WoRMS 2022, GBIF 2022, Cusson 2018).
  - **Lasaeidae indet. is not considered a taxon of concern in Milne Port.**

Taxa collected during the MEEMP and NIS/AIS monitoring surveys should continue to be compared to the best available literature (e.g., check for additions to the Canadian and global invasive species databases on an annual basis) to confirm the geographic ranges of known or suspected NIS/AIS taxa.

In addition to the new taxa described above, five taxa currently on the Program Watchlist were identified in benthic samples (*Ampharete petersenae*, *Marenzelleria* sp., *Crassicorophium* sp., *Paramphitrite birulai*, *Pseudofabricia* sp. nr. *aberrans*). These specimens were sent to specialists in the relative taxonomic groups for further review. The results of the independent reviews are presented in Section 8.5.3.

8.5.2.2 Macroflora and Benthic Epifauna

Dive surveys of the permanent quadrats were performed to assess for presence of macroflora and epifauna species. Dive surveys included collection of algae and invertebrate specimens for taxonomic assessment. 16 macroflora were identified in the 2021 survey that had not been identified previously in surveys at Milne Port; each taxon is described in further detail below. The majority of the new algae taxa were inexact matches to described taxa, designated by “cf.”. In these cases, the indicated taxon was researched in addition to the next highest taxonomic level to identify potential related species or unidentified taxa within the taxonomic group with Arctic distributions.

- An algae taxon was identified as an inexact match to *Spongomorpha aeruginosa*, which has a broad distribution that includes the Eastern Canadian Arctic, with collections from Cape Hatt and Ragged Island, north of the Project Area (WoRMS 2022, GBIF 2022, Küpper et al. 2016).
  - **cf. _Spongomorpha aeruginosa_ is not considered a taxon of concern in Milne Port.**

- An algae taxon from the genus *Rhizoclonium* was identified as an inexact match to *R. riparium*, which has a broad distribution that includes the Eastern Canadian Arctic, with collections from Cape Hatt and Ragged Island, north of the Project Area (WoRMS 2022, GBIF 2022, Küpper et al. 2016). *R. riparium* is considered introduced to Japan and the Mediterranean (Rius et al.2022).
  - ***Rhizoclonium* cf. *riparium* is not considered a taxon of concern in Milne Port.**
- *Chaetomorpha melagonium* is a species of cladophoran green algae with a broad global distribution, including the Canadian Arctic, with collections from Cape Hatt and Ragged Island, north of the Project Area (WoRMS 2022, GBIF 2022, Ellis and Wilce 1961, Küpper et al. 2016).
  - ***Chaetomorpha melagonium* is not considered a taxon of concern in Milne Port.**
- *Desmarestia aculeata* is a species of brown algae with a broad global distribution that includes the Canadian Arctic (WoRMS 2022, GBIF 2022). Records include observations from Baffin Island (Ellis and Wilce 1961, Küpper et al. 2016).
  - ***Desmarestia aculeata* is not considered a taxon of concern in Milne Port**
- *Desmarestia viridis* is a common species of filamentous brown algae with a broad distribution and a natural range that includes the Eastern Canadian Arctic, with collections from Cape Hatt and Ragged Island, north of the Project Area (WoRMS 2022, GBIF 2022, Küpper et al. 2016). *D. viridis* may be alien to the Mediterranean and Adriatic Seas (Rius et al. 2022, Molnar et al. 2008).
  - ***Desmarestia viridis* is not considered a taxon of concern in Milne Port.**
- An algae taxon from the genus *Pylaiella* was identified as an inexact match to *P. varia*, an Arctic species with a limited collection record. Unidentified *Pylaiella* sp. were identified previously in Milne Port (Golder 2021a). During surveys at Cape Hatt, *Pylaiella* species were common and found in many habitat types (Küpper et al. 2016). Molecular studies indicated the presence of a Pacific species (*P. washingtoniensis*) and a European species (*P. littoralis*) in addition to a third species, potentially undescribed (Küpper et al. 2016) indicating the ranges on record for this genus are likely poorly understood.
  - ***Pylaiella* cf. *varia* is not considered a taxon of concern in Milne Port.**
- *Coelocladia arctica* is a poorly described species of brown algae, however records indicate that collections have been made from Baffin Island and northern Milne Inlet (GBIF 2022, Küpper et al. 2016).
  - **cf. *Coelocladia arctica* is not considered a taxon of concern in Milne Port.**
- *Dictyosiphon foeniculaceus* is a brown algae species that has a broad natural distribution (GBIF 2022). Observations of this species have been made on Baffin Island (Ellis and Wilce 1961, Küpper et al. 2016).
  - ***Dictyosiphon foeniculaceus* and cf. *D. foeniculaceus* are not considered taxa of concern in Milne Port.**
- An algae taxon was identified as an inexact match to the brown algae *Dictyosiphon ekmanii*, which has a broad distribution that includes the Arctic and North Atlantic (AlgaeBase 2022). Collections from Cape Hatt and Ragged Island, north of the Project Area indicate the presence of a species of *Dictyosiphon* that does not match any currently described species (Küpper et al. 2016).

  - **cf. *Dictyosiphon ekmanii* is not considered a taxon of concern in Milne Port.**

- An algae taxon was identified as an inexact match to *Trachynema groenlandicum*, a rare epiphytic species from a poorly described genus, containing only two described species, both considered to be Arctic taxa (WoRMS 2022, AlgaeBase 2022). Specimens collected in South America indicate a wider range within the genus (Peters 1992).
  - **cf. *Trachynema groenlandicum* is not considered a taxon of concern in Milne Port.**
- *Petalonia* is a genus of brown algae with a collectively broad global distribution (WoRMS 2022, GBIF 2022). *P. fascia* and *P. zosterifolia* have been identified among algae species in Northern Milne Inlet (Küpper et al. 2016). *P. binghamiae* is reported as alien to the Atlantic (Rius et al. 2022).
  - **cf. *Petalonia* is not considered a taxon of concern in Milne Port.**
- *Phycodrys fimbriata* is a foliose red algae with a broad distribution and a natural range that includes the Eastern Canadian Arctic. Sequence data is available for this species from specimens collected at Baffin Island (GBIF 2022).
  - ***Phycodrys fimbriata* is not considered a taxon of concern in Milne Port.**
- *Coccotylus truncatus* is a foliose red algae with a broad distribution and a natural range that includes the Eastern Canadian Arctic. which has a broad distribution that includes the Eastern Canadian Arctic, with collections from Cape Hatt and Ragged Island, north of the Project Area (WoRMS 2022, GBIF 2022, Küpper et al. 2016).
  - ***Coccotylus truncatus* is not considered a taxon of concern in Milne Port.**
- *Savoiea arctica* is a red algae species from a poorly described genus. The species name is a recent redescription of *Polysiphonia arctica*. This species has been observed on Baffin Island under both taxonomic designations (Ellis and Wilce 1961, Küpper et al. 2016, GBIF 2022).
  - ***Savoiea arctica* is not considered a taxon of concern in Milne Port.**
- *Rhodomela* is a genus of red algae with a broad genus that includes representative species with ranges that include the Canadian Arctic (WoRMS 2022, GBIF 2022). Representative species observed on Baffin Island include *R. confervoides*, and *R. lycopodioides* (Küpper et al. 2016, Brown et al. 2011, Ellis and Wilce 1961).
  - **cf. *Rhodomela* is not considered a taxon of concern in Milne Port.**
- *Dilsea socialis* is a red algae species with a broad distribution that includes the Canadian Arctic and Baffin Island (WoRMS 2022, GBIF 2022, Küpper et al. 2016).
  - ***Dilsea socialis* is not considered a taxon of concern in Milne Port.**

Taxa collected during the MEEMP and NIS/AIS monitoring surveys should continue to be compared to the best available literature (e.g., check for additions to the Canadian and global invasive species databases on an annual basis) to confirm the geographic ranges of known or suspected NIS/AIS taxa.

8.5.2.3 Settlement Substrates

Settlement substrates had been deployed previously in four locations in Milne Inlet with limited success. Loss of all but one of the deployments and limited colonization led to analysis of recruitment only being performed on a subset of the original deployments in 2017, 2018, and 2019 (Golder 2020a). In 2021, settlement substrates were deployed in nineteen locations and will be recovered in subsequent survey years to promote longer soak times to improve colonization and taxonomic resolution. As 2021 is the first survey year to recover the new substrates, the deployment time is one year, comparable to soak times in 2018 and 2019.

As anticipated based on previous efforts, colonization was low on all substrates, with higher colonisation on the rocks in the settlement baskets compared to plates deployed at the same locations. The majority of invertebrate taxa were present only in juvenile or intermediate life stages. In general, juvenile and intermediate life stages are poorly described and most taxa in these stages were not identifiable to species level.

A total of 98 taxa were identified in eighteen settlement substrate samples, 18 of which had not been observed in previous surveys in the Project area. An analysis of the available literature indicated all had clearly described ranges or collection records that included Arctic waters or were North Atlantic species with unknown northern limits that presumably could extend into the Canadian Arctic.

- *Lichenopora* is a bryozoan genus with a limited collection record. However, collections include specimens from the Eastern Canadian Arctic (WoRMS 2022, GBIF 2022, Miller et al. 2014, Goldsmit 2016).
  - ***Lichenopora* sp. is not considered a taxon of concern in Milne Port.**
- *Spongomorpha aeruginosa* is a filamentous and epiphytic green algae with a broad distribution that includes the Eastern Canadian Arctic. Records include collections from Cape Hatt and Ragged Island, north of the Project Area (WoRMS 2022, GBIF 2022, Küpper et al. 2016). An inexact match to this species was also observed in quadrat samples.
  - ***Spongomorpha aeruginosa* is not considered a taxon of concern in Milne Port.**
- *Rhizoclonium* is a genus of green algae with species that have documented distributions that include the Eastern Canadian Arctic, with collections from Cape Hatt and Ragged Island, north of the Project Area (WoRMS 2022, GBIF 2022, Küpper et al. 2016). *R.* cf. *riparium* was identified in quadrat samples.
  - ***Rhizoclonium* sp. is not considered a taxon of concern in Milne Port.**
- *Ulothrix* is a genus of green algae with species that have documented distributions that include the Eastern Canadian Arctic, with collections from Cape Hatt and Ragged Island, north of the Project Area (WoRMS 2022, GBIF 2022, Küpper et al. 2016). The genus contains species may be alien to the Mediterranean Sea (Rius et al. 2022). Indeterminate taxa from the Family Ulotrichaceae, which contains *Ulothrix* were also observed on settlement substrates.
  - ***Ulothrix* sp. and Ulotrichaceae are not considered a taxon of concern in Milne Port.**
- An algae taxon from the genus *Ulva* was identified as an inexact match to *U. prolifera*, a broadly distributed species with an Arctic presence. During surveys at Cape Hatt, *U. prolifera* was identified among macroscopic species in the supralittoral zone (Küpper et al. 2016). *U. prolifera* is considered alien in the Great Lakes (Rius et al. 2022).
  - ***Ulva* cf. *prolifera* is not considered a taxon of concern in Milne Port.**

- Ciliophora is a phylum with a global distribution. Representative species have been collected in Eastern Canadian Arctic waters (WoRMS 2022, GBIF 2022, Stewart 2013). At least eight species are known to be non-indigenous in various locations, none within Arctic waters (Rius et al. 2022).
  - **Ciliophora indet. is not considered a taxon of concern in Milne Port.**
- *Sarsia* is a genus of hydrozoan cnidarians with a global distribution, including taxa with natural ranges that include the Eastern Canadian Arctic and the waters around Baffin Island (WoRMS 2022, GBIF 2022, Miller et al. 2014, Stewart 2013).
  - ***Sarsia* sp. is not considered a taxon of concern in Milne Port.**
- *Leptasterias* (*Leptasterias*) *muelleri* is a species of seastar with a broad distribution which includes the Canadian Arctic, with records from Davis Strait (WoRMS 2022, GBIF2022).
  - ***Leptasterias* (*Leptasterias*) *muelleri* is not considered a taxon of concern in Milne Port.**
- *Arvella faba* is an updated name for *Crenella faba*, which has a natural distribution in the North Atlantic and Eastern Canadian Arctic (WoRMS 2022, GBIF 2022). Records included collections and observations of *Crenella faba* from the Canadian Arctic near Baffin Island (Miller et al. 2014, Cusson 2018, Ellis and Wilce 1961).
  - ***Arvella faba* is not considered a taxon of concern in Milne Port.**
- *Dendronotus* is a nudibranch genus with at least one species that has a natural range within the Eastern Canadian Arctic (WoRMS 2022, GBIF 2022). Records from the Canadian Arctic include specimen collections of *D. robustus* and *D. frondosus* (Stewart 2013, Miller et al. 2014).
  - ***Dendronotus* sp. is not considered a taxon of concern in Milne Port.**
- Chordariaceae is a family of brown algae with a broad distribution that includes species with ranges in the eastern Canadian Arctic (WoRMS 2022, GBIF 2022). During surveys at Cape Hatt, multiple indeterminate Chordariaceae were identified (Küpper et al. 2016). Representative species include *Trachynema groenlandicum*, *Dictyosiphon ekmanii, D. foeniculaceus* and *Coelolcadia arctica*, taxa provisionally identified in quadrat surveys and incidental collections (discussed in Sections 8.5.2.2 and 8.5.2.4).
  - **Chordariaceae indet. is not considered a taxon of concern in Milne Port.**

New taxa observations on settlement substrates also included two algae taxa observed in the quadrats for the first time (*Pylaiella* cf. *varia* and cf. *Trachynema groenlandicum*), these are discussed in Section 8.5.2.2.

In addition to the new taxa described above, three taxa currently on the Program Watchlist were identified on settlement substrates (*Marenzelleria* sp., *Crassicorophium* sp., and *Monocorophium insidiosum*). These specimens were sent to specialists in the relative taxonomic groups for further review. The results of the independent reviews are presented in Section 8.5.3.

8.5.2.4 Fish and Incidentals

All taxa observed during marine surveys at Milne Port are considered as part of the NIS/AIS program. This includes observations during habitat offset monitoring, or non-targeted captures such as invertebrate species during fishing efforts. During survey efforts for the MEEMP program, 85 taxa were caught or observed incidentally; of these, ten were new records (i.e., not on the Milne Inlet Taxonomic Inventory), including duplicate observations through other methodologies. Notably, new observations included four freshwater taxa, all collected from the stomach of a single Arctic Char incidental mortality. As Arctic Char are often observed near sources of freshwater in Milne Port, these taxa likely originated from a freshwater source such as Phillips Creek.

All taxa observed incidentally in MEEMP and NIS/AIS surveys were cross-checked against marine invasive species databases. None of the taxa observed were identified as globally recognized invasive species (Molnar et al. 2008) or as domestically recognized invasive species according to the National Risk Assessment for Introduction of Aquatic Nonindigenous Species to Canada by Ballast Water (Casas-Monroy et al. 2014). In addition to these databases, the distribution and habitat preferences of each taxa was researched independently in the literature for signs of NIS status in the Arctic region. For specimens that could not be resolved to species, review efforts focussed on confirming that the higher-level classification (e.g., genus) had at least one species with a distribution that included Arctic waters.

- *Hydrobaenus* is a genus of freshwater chironomids with a global distribution, including collection records from the Canadian Arctic (GBIF 2022).
  - ***Hydrobaenus* sp. is not considered a taxon of concern in Milne Port.**
- Simuliidae is a family of freshwater dipterans with a global distribution, including collection records from the Canadian Arctic (GBIF 2022, Stewart 2013).
  - **Simuliidae indet. is not considered a taxon of concern in Milne Port.**
- Tipulidae is a family of freshwater dipterans with a global distribution, including collection records from the Canadian Arctic (GBIF 2022, Stewart 2013).
  - **Tipulidae indet. is not considered a taxon of concern in Milne Port.**
- Ephemeroptera is an order of freshwater arthropods with a global distribution, including collection records from the Canadian Arctic (GBIF 2022, Stewart 2013).
  - **Ephemeroptera indet. is not considered a taxon of concern in Milne Port.**
- *Urospora neglecta* is a poorly described species of green algae, however collections records indicate it has a broad range that includes North Atlantic and Arctic waters (GBIF 2022). Unidentified species from this genus have been observed in the Eastern Canadian Arctic (Brown et al. 2011). Genetic work is required to better describe this genus in Canadian waters (Saunders 2022).
  - **cf. *Urospora neglecta* is not considered a taxon of concern in Milne Port.**
- *Aspidophoroides olrikii*, or the Arctic Alligatorfish is a common benthic fish species with a broad range across North America and the Arctic Ocean. Collection records include specimens from the Eastern Canadian Arctic and Baffin Island under the former name, *Ulcina olrikii* (Miller et al. 2014, DFO 2019, Stewart 2013).
  - ***Aspidophoroides olrikii* is not considered a taxon of concern in Milne Port.**

- *Leptagonus decagonus*, the Atlantic Poacher or Kanajordlak in Inuktitut has a broad circumpolar and North American distribution with a natural range that includes the Project Area (WoRMS 2022, GBIF 2022, Miller et al. 2014, DFO 2019).
  - ***Leptagonus decagonus* is not considered a taxon of concern in Milne Port**
- *Triglops pingelii*, the Ribbed Sculpin is a fish species with a broad circumarctic distribution (WoRMS 2022, GBIF 2022). Collection records confirm presence of the species around Baffin Island (Miller et al. 2014, DFO 2019, Stewart 2013).
  - ***Triglops pingelii* is not considered a taxon of concern in Milne Port.**
- *Eumicrotremus spinosus*, the Atlantic Spiny Lumpsucker (Man-iktoe, Nepisardluarsuk, or Nepisardluk in Inuktitut) is species with a natural range to the Eastern Canadian Arctic (WoRMS 2022, GBIF 2022, Miller et al. 2014, DFO 2019).
  - ***Eumicrotremus spinosus* is not considered a taxon of concern in Milne Port.**
- Brachiopoda is a broad phylum with a global distribution (WoRMS 2022, GBIF 2022). While there is at least one recorded alien species within this Phylum (Rius et al. 2022), there are many species with natural ranges that include the Project Area.
  - **Brachiopoda indet. is not considered a taxon of concern in Milne Port**

New taxonomic records in incidental samples also included taxa observed in other methods for the first time (Brachiopoda [Benthic Infauna], *Desmarestia viridis* [Quadrats], *Pylaiella* cf. *varia* [Quadrats and Settlement Substrates], and *Coccotylus truncatus* [Quadrats]), these are discussed in Section 8.5.2.2.

Additionally, in trawl samples, fish specimens were identified as *Liparis* sp. and *Myoxocephalus* sp. Biologica indicated the specimens were potentially *L. tunicatus* (Kelp Snailfish) or *L. gibbus* (Variegated Snailfish), and *M. aenaeus* (Grubby), although identifying features were not clear (Appendix 8B-3). Unidentified species from these genera have been observed in previous surveys, and therefore these identifications were not added to the list of new taxonomic observations. However, the potential taxa were checked against the available resources to confirm that they have natural distributions that include the Eastern Canadian Arctic (WoRMS 2022, GBIF 2022, Coad and Reist 2018).

8.5.3 Independent Verifications and Program Watchlist

Results of independent verification through morphological assessment are pending and will be updated as reviews become available.

The NIS/AIS program is conducted at a surveillance level and designed to flag potential invasive or non-indigenous species; the independent verification process is a crucial element of the program, ensuring third party review by global specialists in particular taxa. A summary of specimens flagged for review is provided in Table 8-10 and results of verifications will be provided once available. A summary of all newly recorded taxa in 2021 and the results of verifications will be available in Appendix 8E-1. A complete list of the Project Watchlist for taxa of concern in Milne Port is included in Appendix 8F-2.

Table 8-10: Summary of Taxa Verifications 2021

Initial ID	Year(s) Present	Verification Method	Independent ID	Risk[1]	Action	Rationale
Annelida						
Pseudofabricia sp. nr. *aberrans*	2019 – 2021	DNA	No match, Family Fabriciidae	No Risk	Remove from Watchlist	No match to existing sequences on record, confirmed not to be the previous alternative identification, *Fabricia stellaris*. It is considered probable these specimens are of a currently undescribed species with a range that would include the Project area.
Marenzelleria sp.	2016 – 2021	DNA	*Marenzelleria wireni*	No Risk	None	*M. wireni* is a native Arctic species with a probable natural range that includes the project area. Other *Marenzelleria* sp., aside from *M. arctia* and including *M. viridis* remain on the Watchlist as High Risk taxa.
Ampharete petersenae	2020 – 2021	Morphological assessment	TBD	No Risk	Remove from Watchlist	Independent morphological assessment results are pending. However, limited records indicate natural range extends into Arctic waters, including potentially Western Greenland. It is considered likely that the natural range would include the Eastern Canadian Arctic.
Paramphitrite birulai	2020 – 2021	Morphological assessment	TBD	Low Risk	Watchlist	Independent morphological assessment results are pending. Taxon risk status remains “Low” due to records of potential introductions in the Adriatic Sea. The designated risk status may be updated based on the results of review.
Arthropoda						
Diastyloides biplicatus	2021	Morphological assessment	*Diastylis* sp.	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures due to a transcription error being captured by the review process. Morphologically similar genera, *Diastyloides* and *Diastylis* both include Canadian Arctic species, which have previously been observed in Milne Port.
Crassicorophium sp.	2013, 2017, 2018,	DNA	No match, Corophiidae indet.	Low Risk	Watchlist	Species was not able to be confirmed. Species remains unidentified and on the Watchlist as a precaution.

Initial ID	Year(s) Present	Verification Method	Independent ID	Risk[1]	Action	Rationale
	2020, 2021*	Morphological assessment	*Crassicorophium clarencense*	No Risk	None	*Crassicorophium clarencense* is a Canadian Arctic species and has been previously observed in Milne Port surveys.
Bryozoa						
Tricellaria sp.	2021	Morphological assessment	Candidae indet.	No Risk	None	Bryozoans of the family Candidae include multiple species with natural ranges that include the Canadian Arctic and have previously been observed in Milne Port surveys. It is considered probable that the Candidae indet. specimens represent a Canadian Arctic species.
Chlorophyta						
Chaetomorpha melagonium	2021	DNA	Inconclusive due to failed sequencing.	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures. Morphological assessment identified this to be a mossy green algae species with a broad distribution, including collections from Baffin Island.
cf. *Urospora neglecta*	2021	DNA	*Urospora neglecta*	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures. The comparative species is poorly described. The limited specimen collections are from a broad geographical range, including North Atlantic and Arctic waters.
Ochrophyta						
Desmarestia aculeata or *Dictyosiphon foeniculaceus*	2021	DNA	*Desmarestia aculeata*	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures. Brown algae species with a broad global distribution, including observations from Baffin Island.
cf. *Desmarestia viridis*	2021	DNA	Genus *Desmarestia*	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures. Brown algae genus with a broad global distribution, including observations from Baffin Island and Canadian Artic.
cf. *Dictyosiphon foeniculaceus*	2021	DNA	*Dictyosiphon foeniculaceus*	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures. Brown algae species with a broad global distribution, including collections from Baffin Island.

Initial ID	Year(s) Present	Verification Method	Independent ID	Risk[1]	Action	Rationale
Pylaiella cf. *varia*	2021	DNA	Family Acinetosporacea	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures. At least two species and one unidentified species collected from the Arctic.
cf. *Coelocladia arctica*	2021	DNA	Inconclusive due to failed sequencing.	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures. Poorly described species of brown algae. Collection records indicate non-georeferenced Canadian specimens were collected from Ragged Island.
cf. *Petalonia* or other Brown algae	2021	DNA	Inconclusive due to failed sequencing.	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures. Brown algae genus with a broad global distribution, including species observations from Baffin Island.
Rhodophyta						
Coccotylus truncatus	2021	DNA	*Coccotylus truncatus*	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures. Foliose red algae species with a global distribution including records from the Canadian Arctic and northern Baffin Island.
Savoiea arctica	2021	DNA	Inconclusive due to failed sequencing.	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures. Recently proposed taxonomic designation, considered an Arctic and North Atlantic species, with collections from Western Greenland and Baffin Island.
cf. *Rhodomela*	2021	DNA	*Rhodomela virgata*	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures
Dilsea socialis	2021	DNA	*Dilsea socialis*	No Risk	None	Taxon was not considered flagged. Sent for verification as part of internal QA/QC procedures. Red alga with a broad distribution, including collections from Baffin Island.

**Crassicorophium bonelli* in 2013, 2017, 2018, *C. clarencense* in 2020.

[1]Risk category refers to the taxonomic description following independent verification.

8.5.3.1 Polychaetes

8.5.3.1.1 Pseudofabricia aberrans

A sabellid polychaete worm was found in benthic infaunal samples in 2018 and tentatively classified to the *Pseudofabricia* genus. *P. aberrans* is currently the only described species in this genus and this species range has only been defined in the Mediterranean Sea and, therefore, is assumed to be endemic to that region (Giangrande and Cantone 1990, WoRMS 2022). However, specimens of *P. aberrans*, as well as unidentified specimens from the *Pseudofabricia* genus, have been identified in waters around the United Kingdom and the Black Sea indicating the range may extend further, or the genus is present as NIS outside of the Mediterranean Sea (OBIS 2021). Due to the limited distribution record for *P. aberrans* not including Arctic waters, *P. aberrans* was added to the Program watchlist as a "Low Risk" taxon.

Only a limited description exists for *P. aberrans*, and polychaete surveys in the Canadian Arctic are not exhaustive. It is likely these specimens are either a cryptic species related to *P. aberrans*, or that the range on record is incomplete. *P. aberrans* is not listed as an invasive species or a species of concern in Canadian or Arctic waters (Molnar et al. 2008, Casas-Monroy et al. 2014). As the samples collected from Milne Port were morphologically similar to the species description of *P. aberrans*, a temporary identification of *Pseudofabricia* sp. nr. *aberrans* was assigned to those specimens, indicating an inconclusive identification near to *P. aberrans*. The 2018 specimens were flagged and sent for independent verification at Laval where they were tentatively identified as *Manayunkia aesturiana*, which has a documented Arctic range (Miller et al. 2014).

Pseudofabricia sp. nr. *aberrans* was again flagged in benthic samples in 2019 and 2020 because of ongoing uncertainty in its identification. The specimens were collected from sample sites ranging between approximately 65 m to 90 m water depth, which precluded the identification of *M. aesturiana*, which is limited to shallow, estuarine waters (MacDonald 2020, pers. comm.). Laval identified the specimens as *Fabricia stellaris*. *F. stellaris* and *P. aberrans* are both members of Fabriciidae, a family of sabellid worms. *F. stellaris* has a fairly broad distribution that includes Pacific, Atlantic, Arctic and Southern Oceans; specimen collections have been made from Southern Baffin Island and Western Greenland (WoRMS 2022, GBIF 2022).

However, Biologica disagreed with the identification based on the fact that specimens lacked a distinguishing feature (i.e., pseudospatulate chaetae) that would indicate the genus *Fabricia.* Rather, in Biologica's professional opinion, the lack of the feature in question is characteristic of *Pseudofabricia* (MacDonald 2021, pers. comm.). Additional experts from Columbia Science and EcoAnalysts Inc. were consulted for their review of the 2018 and 2019 specimens. Columbia Science agreed that the specimens did not match *F. stellaris* and the keys indicated *P. aberrans* as the identification of the specimens, but recommended the identification remain as Fabriciidae indet. until further information was available on this group (Lipovsky 2021, pers. comm.). EcoAnalysts agreed with the identification of *Pseudofabricia* sp. nr. *aberrans*, as the specimens contained short ventral filamentous appendages on the branchial crown, a characteristic of *Pseudofabricia* that is absent in *Fabricia* (McGraw 2021, pers. comm.). Both *F. stellaris* and *M. aesturiana* have documented Canadian Arctic ranges and are not listed in AIS databases and are therefore considered no risk.

Three specimens tentatively identified as *Pseudofabricia* in 2020 and 2021 were sent for DNA analysis, however the results were largely inconclusive. The three specimens were considered genetically identical (i.e., from the same species), however there were no matches to existing specimens on record. The specimens were 79.23% similar to sequences for *Fabricia stellaris,* which is too dissimilar to be of the same species. This result does not exclude *Pseudofabricia aberrans* as a potential identification, as there are no sequences available for the genus, and only five records for the Family Fabriciidae. Due to the limited information available for Fabriciidae, it is

unlikely this identification will be resolved further. However, considering there are no matches to described species on record, the poor taxonomic record for the Family Fabriciidae, and the incomplete taxonomic records for the Canadian Arctic region, it is probable that these specimens are of a currently undescribed species with a range that would include the Project area (MacDonald 2022b,c, pers. comm.) and would not represent a Project related introduction to Milne Port. Based on these results, it is recommended the risk status of *P.* sp. nr. *aberrans* be revised to "No Risk" and the taxon removed from the Program Watchlist.

- **The status of *P.* sp. nr. *aberrans* is revised to No Risk and will be removed from the Watchlist.**
- ***F. stellaris and M. aesturiana* are designated as No Risk and are not considered species of concern in Milne Inlet.**

8.5.3.1.2 Marenzelleria sp.

In 2019 and 2020, specimens from the worm family Spionidae were identified as *Marenzelleria viridis.* Unidentified species from this genus had been identified in benthic samples prior to 2019 (2016, 2017 and 2018). *M. viridis* was designated a High Risk species for Milne Inlet due to it being listed in the Global Database as invasive to areas outside of East Coast North America (Molnar et al. 2008). It is also listed in the National Risk Assessment as a potential invader to Canadian waters, including the Arctic region (Casas-Monroy et al. 2014). The primary invasion vector is considered to be transport through ballast water and sediments and once established, locally by currents (Molnar et al. 2008). Introduced to California, Scotland, the North Sea, and the Baltic Sea, *M. viridis* reaches high densities, in some locations replacing native infauna and altering sediment characteristics (Molnar et al. 2008, Fofonoff et al. 2021). Once established, management is considered highly difficult (Molnar et al. 2008).

Specimens from 2017, 2018, 2019, and 2020 were sent to Dr. Vasily Radashevsky of the Russian National Scientific Center of Marine Biology in Vladivostok. Biologica recommended Dr. Radashevsky review the identification due to his expertise on Spionidae, the order of marine worms that contains *Marenzelleria*, as well as his familiarity with Canadian spionids through collaborative research with the Canadian Museum of Nature in Ottawa. Based on morphological examination, Dr. Radashevsky concluded that none of the specimens matched descriptions for *Marenzelleria viridis* (Radashevsky 2021a, b, pers. comm). Rather, specimens from 2020, collected from stations near Phillips Creek, matched features described for *M. arctia*. Further, while not a conclusive distinguishing trait, pigmentation in the head of the specimens closely matched specimens of *M. arctia* from the White Sea (Radashevsky 2021a, pers. comm.). One specimen collected in 2019 from the near the Ore Dock was identified as likely being *M. wireni*. The remaining specimens from 2017, 2018, and 2019 were less conclusive due to a combination of juvenile life stages and specimen condition but were considered likely either *M. neglecta* or *M. wireni*, or a mix of the two (Radashevsky 2021b, pers. comm). Fifteen specimens collected from three stations in Milne Port were sent to Dr. Radashevsky for DNA. The specimens were conclusively identified as *Marenzelleria wireni* (Radashevsky 2022, pers. comm.). A formalized laboratory report on the molecular identification is pending

The genus *Marenzelleria* contains five recognized species, of which *M. bastropi* and *M. neglecta* are the most recently described (Bick 2005; Sikorski and Bick 2004). The genus is presumed to have evolved in the Arctic, with *M. arctia* considered the most basal of the extant species (Blank and Bastrop 2008, Radashevsky et al. 2022). *Marenzelleria* sp. can be difficult to distinguish based simply on morphology due to a combination of limited descriptions, overlapping morphological traits (particularly in smaller specimens), lack of differentiating features in immature specimens, and hybridization between species (Sikorski and Bick 2004; Bick 2005; Blank et al. 2004,

Radashevsky et al. 2021). *M. viridis*, *M. neglecta*, and *M. arctia,* in particular, are morphologically similar, resulting in the three species being part of a cryptic sibling species complex (Sikorski and Bick 2004; Bick 2005; Green 2015). The recent redescriptions of the genus, descriptions of new species based on historical collections (*M. bastropi* and *M. neglecta*), incorrect species denomination in reporting, and synonymization of the former description of *M. jonesi* with *M. viridis* lead to uncertainty in the historical specimen records, particularly where distributions overlap (Blank et al. 2008; Sikorski and Bick 2004). As many historically collected specimens are no longer available, there is an inherent uncertainty in the actual species that may be represented by these original collections. Despite morphological similarities between species, there are notable behavioral and ecological differences that may aid in species differentiation (Renz and Forster 2013; Sikorski and Bick 2004).

At present, recognized species in the genus include:

- ***M. arctia*** – an Arctic Basin species, first described in the Beaufort Sea, Alaska, USA (Chamberlin 1920). Generally found at depths from 0 to 30 m, with an apparent preference of depths between 20-30 m (Sikorski and Bick 2004; Green 2015). Tolerant of large fluctuations in temperature and salinity, with salinities of 3-16‰ being the most favourable range (5-7‰ for reproduction) (Sikorski and Bick 2004). Phylogenetic analysis of *Marenzelleria* suggests *M. arctia* is the most basal taxon in the genus and may represent the ancestral species (Blank and Bastrop 2008).
- ***M. bastropi* (*M.* sp. A, *M.* Type III[2])** – Most recently described species in genus. Current known distribution is limited to Currituck Sound, North Carolina, where it occurs sympatrically with *M. neglecta*. Closely related (morphologically) to *M. neglecta* and *M. viridis*.
- ***M. neglecta* (*M.* Type II)** – Indications of a broad range, including the Atlantic Ocean, the Baltic Sea, and the Arctic Ocean, including in Canada (Bastrop et al. 1997; Sikorski and Bick 2004, CABI 2022). Morphologically similar to *M. viridis*, and having overlapping habitats, differentiation between *M. viridis* and *M. neglecta* may be made based on *M. neglecta* generally preferring lower salinities (0.5-10‰ compared to 16‰ for *M. viridis*) (Sikorski and Bick 2004).
- ***M*. *viridis* (*M.* Type I)** – natural range presumed to be the western coast of the north Atlantic – described as native to east coast North America from Nova Scotia to Delaware, with a probable native range that includes waters around Newfoundland to Chesapeake Bay (Fofonoff et al. 2022). *M. viridis* is apparently more sensitive to low salinities compared to other species of *Marenzelleria*, typically found in eulittoral habitats with brackish waters where salinities do not fall below 16‰ (Sikorski and Bick 2004; Bastrop and Blank 2006).
- ***M*. *wireni*** – Poorly described with a limited collection record, however records indicate the species is broadly distributed in Arctic waters with collections in the North American, European and Russian Arctic zones (GBIF 2022). Salinity tolerances are not well understood, the species being described as found in a range of depths between 1 m and 55 m, where salinities are not below 30‰ (Sikorski and Bick 2004), but also associated with brackish and freshwater habitats (Bick 2005, EOL 2022, WoRMS 2022).

M. viridis and *M. neglecta* are listed in the Database of Global Marine Invasive Species Threats as 'invasive to areas outside of East Coast North America' (Molnar et al. 2008). They are also listed in the National Risk

[2] Type I, II, and II, and sp. A were names assigned to specimens with features that differentiated them from currently described species. While descriptions now exist, these names are still used in some literature, or were used in literature relevant to this report.

Assessment as a potential invader to Canadian waters, including the Arctic region (Casas-Monroy et al. 2014). However, collections of *Marenzelleria* in Canadian waters, including the Canadian Arctic, may indicate the currently listed range or taxonomic record is incomplete for this genus in Canada (Stewart et al. 1985; Cusson 2018; Brown et al. 2011; GBIF 2022; Miller et al. 2014). A review of the literature indicates that while the known documented ranges of these species do not include the Eastern Canadian Arctic, available evidence via historical collections suggested the genus was present in the area prior to Project operations and that multiple *Marenzelleria* species may be cryptogenic, if not indigenous to the Canadian Arctic (Stewart et al. 1985; Cusson 2018; Brown et al. 2011; GBIF 2022; Miller et al. 2014; Golder 2021a). However, due to the morphological similarities between species and the lack of available specimens for review, these may represent instances of *M. viridis, M. arctia*, *M. wireni* or *M. neglecta* (Radashevsky 2021a, pers. comm.)

The corrected species identifications are further supported by the environmental conditions at Milne Port. Oceanographic data collected at Milne Port indicates that the nearshore environment is subject to a wide range of salinity (from near zero to 30 PSU - approximately equivalent to 0-30‰),) and water temperature (0°C to 12°C) due to distinct water masses moving with tides, presumed to be influenced by freshwater input from Phillips Creek and melting sea ice in Milne Port (Golder 2021b). *Marenzelleria* specimens identified between 2016-2020 were collected in similar locations to the Ore Dock tide gauge and the mouth of Phillips Creek. The range of temperatures and salinities observed in the area support the identifications of *M. arctia* and *M. neglecta*, which are more tolerant of large fluctuations in temperature and salinity, and generally found in lower salinities compared to *M. viridis*, which is not typically found in areas where salinity falls below 16‰ (Sikorski and Bick 2004; Green 2015; Quintana et al. 2018).

Additionally, and more relevant to Baffinland operations, monitoring of benthic communities at Milne Port reveals no warning signs of invasion, even after sampling intensity was substantially increased in 2020. *Marenzelleria* sp. are among 264 annelid taxa documented at Milne Port, and there is no indication that any of the other taxa are experiencing a loss of abundance or diversity that would be associated with impacts from an invasion. Notably, the abundance and diversity of polychaetes in Milne Port is in direct contrast to locations where *Marenzelleria* has successfully invaded. Native species and functional diversity are generally naturally low in areas where *Marenzelleria* spp. have successful invaded (Kauppi et al. 2015; Maximov et al. 2014). In particular, these areas are characterized by very low abundances of marine polychaete worms, especially larger burrowing forms functionally similar to *Marenzelleria* (Maximov 2015; Quintana et al. 2018). These ecosystems are generally adapted to an absence of bioturbators and, due to a lack of competition, *Marenzelleria* spp. were able to fill that void, disrupting the existing environment by changing sediment characteristics through burrowing behaviour. In addition to low diversity, increasing eutrophication has also caused these areas to be vulnerable to successful invasion by *Marenzelleria* and other invasive species (Kauppi et al. 2015; Maximov et al. 2014).

The local receiving environment at Milne Port is not subject to the degree of disturbance from eutrophication as observed in other areas such as the Baltic Sea. *Marenzelleria* spp. are not expected to have a competitive advantage in Milne Port as was observed during invasions in Europe. Should a non-indigenous species of the genus *Marenzelleria* be introduced to Milne Port, the risks of an invasion similar in scale to what has been observed in European waters is therefore not expected.

Benthic sampling in 2021 included targeted collections where *Marenzelleria* was previously observed. Three out of six targeted stations had no *Marenzelleria* present, reinforcing the lack of invasive behaviour observed in 2020. One station had *Marenzelleria* sp. in low abundance present where it had not been observed previously, however the station was located between stations where *Marenzelleria* sp. has been observed in 2018, 2019 and 2020, and this cannot be considered a geographic spread within Port.

Marenzelleria species are known successful invaders to European waters, mediated by ballast water, and thus this genus is listed in AIS databases. Accordingly, this genus is designated as High Risk. However, biogeographic evidence suggests multiple species are indigenous to the Canadian Arctic or may be cryptogenic, while ecological evidence indicates it is not showing invasive behaviour in Milne Port. Further, documented occurrences of the genus in waters around Baffin Island prior to the commencement of shipping operations confirm this is not a Project-related introduction (if it is to be considered an introduction at all). For these reasons, *Marenzelleria wireni* and *Marenzelleria arctia* are designated “No Risk” and will not be placed on the Program Watchlist, however, other members of the genus *Marenzelleria*, and *M. viridis* in particular will remain on the Watchlist where it is subject to heightened monitoring efforts.

- ***Marenzelleria wireni* and *Marenzelleria arctia* are designated “No Risk” and are not considered a taxon of concern in Milne Port.**
- ***Marenzelleria* spp. aside from *M. wireni* and *M. arctia* are designated “High Risk” species of concern in the Project area. Their occurrence in Milne Inlet is not considered attributable to the Project. As ‘High Risk’ species, they have been placed on the Project Watchlist.**

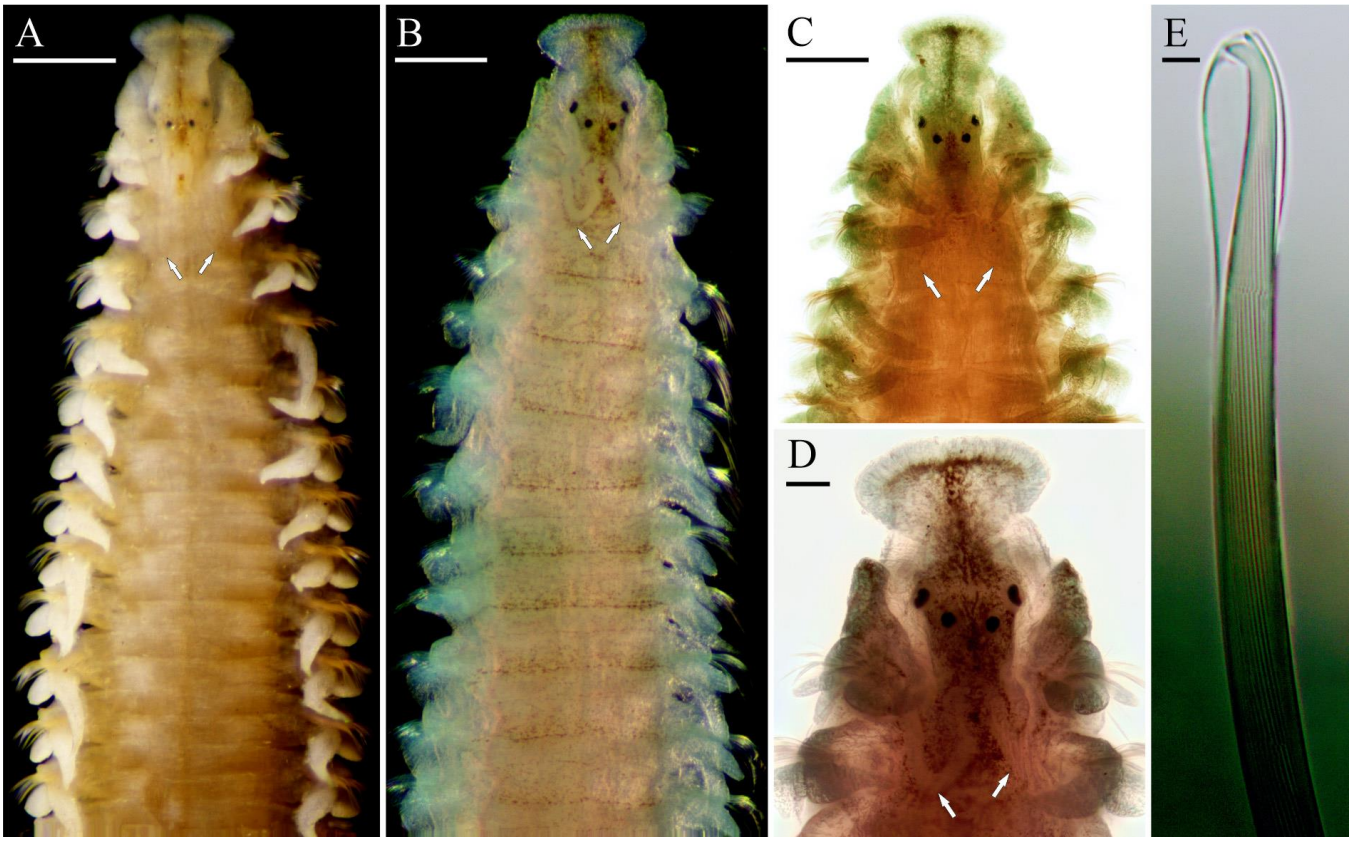


Figure 8-7: Features of *Marenzelleria* sp. identified in 2020 benthic infaunal samples at Milne Port. A-D) anterior ends, dorsal view, E) Bidentate hooded hook from a neuropodium of a middle chaetiger. Arrows showing the posterior ends of U-shaped nuchal organs. Scale Bars A) 300 µm, B) and C) 200 µm, D) 50 µm, E) 5 µm. Formalin fixed specimens. Figure credit Radashevsky et al. 2021, Figure 4.

8.5.3.1.3 *Ampharete petersenae*

The terebellid polychaete worm, *Ampharete petersenae* is a relatively recently described species. Specimens were first identified in Milne Port in 2020. No description of its range is available, though specimen collection records indicate the range may include the North Atlantic as well as Arctic waters around Iceland, where the species was first described (Jirkov 1997; WoRMS 2022; Parapar et al. 2012). An anecdotal report indicates that this species may have been present in western Greenland (Parapar et al. 2012). *Ampharete petersenae* is not listed in AIS databases; the specimen was sent for independent verification in 2020 and 2021 as a precaution due to uncertainty in the described range on record. Laval confirmed the identification of *A. petersenae* in 2020. The taxon was considered No Risk, but flagged for review in 2021 in case more information defining the range was available. No new range information was available in 2021 but considering the reports of specimens in the North Atlantic and Arctic waters, including potentially western Greenland, it is considered unlikely that it represents an introduction in Canadian Arctic waters. *A. petersenae* is designated no risk and will be removed from the program watchlist.

- ***A. petersenae* is designated as No Risk and is not considered species of concern in Milne Inlet.**

8.5.3.1.4 *Paramphitrite birulai*

The terebellid polychaete *Paramphitrite birulai* is poorly described with a limited taxonomic record. No range description exists for this species, but collection records indicate the range may be wide and include the European North Atlantic and high Arctic oceans (WoRMS 2022; Jirkov 2020). There are also indications of introductions in the Adriatic Sea, where it is described as non-indigenous, but not invasive (Rius et al. 2021, Loia 2017). Uncertainty in the range of this taxa is compounded by disagreement in the accepted name, with some sources indicating the species is *Amphitrite birulai*, which has a narrower range on record, with type localities in Scandinavian waters (WoRMS 2022). Collection records for this species in North America are limited to a single specimen collected off the coast of Labrador in 1987 (Gagnon and Torgersen 2021) and Yukon/Alaska under the junior synonym *P. tetrabranchiata* (GBIF 2022).

The specimen was flagged for independent verification as a precaution due to uncertainty in the described range on record; however, the wide high Arctic range derived from a few collection events indicates this is unlikely to be a species of concern. In 2020, Laval confirmed the identification under the alternative name *Amphitrite birulai*. *Amphitrite birulai* is considered Low Risk because, although it is not listed in AIS databases, it has potentially been flagged as alien in the Adriatic and does not have a documented distribution in the Canadian Arctic; therefore, it has been placed on the Watchlist.

- ***Paramphitrite/Amphitrite birulai* is designated Low Risk and will be placed on the Watchlist.**

8.5.3.2 Arthropods

8.5.3.2.1 *Diastyloides biplicatus*

In benthic samples, a specimen was initially recorded as *Diastylis bidentata*, an Arctic Cumacean species that has a natural range that includes the Canadian Arctic. However, collection records are limited to the Pacific region of the Arctic and the Pacific Ocean (WoRMS 2022, GBIF 2022), although there are few georeferenced collections on record and the range description is likely incomplete. Due to the primarily Pacific distribution, the taxon was flagged for further review. Biologica re-examined the specimen and determined a transcription error had occurred,

and the specimen should have been recorded as *Diastyloides biplicatus*, which has a Canadian Arctic range and has been previously observed in Milne Port and in other samples from 2021. The specimen was not considered a taxon of concern but was flagged for independent verification as part of QA/QC procedures.

Independent review by Laval was inconclusive, although they suggested the specimens were *Diastylis* sp. The specimen was not able to be resolved further due to it lacking distinguishing features in the juvenile stage. Biologica did not agree with the Laval identification due to the use of an outdated taxonomic resource, however they indicated that there is existing confusion in the literature in differentiating the genera (MacDonald 2022d, pers. comm.). *Diastylis* is a large genus that includes several species with documented natural ranges that include the Eastern Canadian Arctic. At least nine species of *Diastylis* have been observed in previous surveys in Milne Port (Appendix 8A-1).

The initial flagging of *D. bidentata* demonstrates how the NIS/AIS monitoring program is effective at identifying taxa for further review, and that QA/QC procedures are working as intended.

- ***Diastyloides biplicatus* and *Diastylis* sp. are not considered taxa of concern in Milne Port.**

8.5.3.2.2 *Crassicorophium* sp. / *Monocorophium* sp.

An amphipod crustacean was identified in 2013 and 2017 samples as *Monocorophium insidiosum*. In 2018, individuals from the same genus were found with their identifying features missing and therefore only identified to the genus level. No species within this genus have confirmed distributions that include Arctic waters. *M. insidiosum* is a tube-building gammarid amphipod and a well-known fouling invasive species with a wide global distribution that is possibly non-indigenous to the Canadian Arctic (Molnar et al. 2008). Vectors for introduction and spread are through biofouling of ship hulls and hard substrates in harbours and ports and possibly also through accidental transplant (Fofonoff et al. 2021, Molnar et al. 2008). In addition to *M. insidiosum*, two other species in this genus (*M. acherusicum* and *M. sextonae*) are also considered invasive (Molnar et al. 2008).

In 2019 and 2020, specimens tentatively identified as *M. insidiosum* and *Monocorophium* sp. from samples in the 2017 through 2020 NIS/AIS programs at Milne Port were flagged and sent for independent taxonomic verification by Laval (the 2013 specimens were not available for re-review). Results suggested that the specimens identified in those years may have been *Crassicorophium bonelli* or *Crassicorophium* sp., although the identification was considered uncertain by Biologica (MacDonald 2020, pers. comm.).

C. bonelli has a known range similar to *M. insidiosum*, covering eastern North America and the northeastern Atlantic Ocean, but is not considered invasive in these locations (GBIF 2022, ETI 2021, Sirenko et al. 2020). No taxonomic record was found of this species in Arctic waters during review; however, similar to *M. insidiosum*, *C. bonelli* was also identified in Milne Port during baseline surveys in 2013. The genus *Crassicorophium* contains at least two species (*C. clarencense* and *C. crassicorne*) with a native range that includes Arctic Canada (GBIF 2022, WoRMS 2022). *C. clarencense* were observed in Milne Port surveys in 2020 (Appendix 8A-1). *C. bonelli* is not listed in AIS databases but is considered alien to the South Atlantic and Australia.

No *Monocorophium* specimens were identified in 2021 samples, however both *Crassicorophium* sp. and *C. bonelli* were found. Due to morphological similarities between the genera, uncertainties with the ranges and the potential for invasive behaviours in some species within the genera, these specimens were flagged for further review. While uncertainty remains in the Arctic range, taxonomic identification, and NIS/AIS status of both *M. insidiosum* and *C. bonelli*, there is confidence that these do not represent Project-related introductions because of their

presence in Milne Port prior to the commencement of shipping operations. Specimens tentatively identified as *Crassicorophium bonelli* were found in samples collected for molecular analysis. Results were inconclusive, but indicated the specimens were not *Monocorophium* species or *Crassicorophium bonelli*. The closest match was to unidentified specimens collected from Victoria Island in Nunavut, which were thought to be *C. clarencense* (MacDonald 2022c, pers. comm.).

Specimens were also sent to Dr. Craig Straude at Friday Harbor Laboratories at the University of Washington for morphological assessment. Dr. Straude confirmed the identification for *C. clarencense* for specimens analysed based on several validating features (MacDonald 2022d, pers. comm.).

- **While the presence of *Monocorophium* sp. in the Project area remains unconfirmed due to tentative/ uncertain identification, the genus is designated 'High Risk' for the Project area as a precaution, and it has been placed on the Project Watchlist.**
- ***Crassicorophium bonelli* and *Crassicorophium* sp. are designated 'Low Risk' taxa of concern in the Project area. Their occurrence in Milne Inlet is not considered attributable to the Project. These taxa have been placed on the Project Watchlist.**
- ***Crassicorophium clarencense* is not considered a taxon of concern in Milne Port.**

8.5.3.3 Bryozoans

8.5.3.3.1 *Tricellaria* sp.

Among bryozoan species in 2021 benthic infauna samples was an unidentified species from the genus *Tricelleria.* This genus includes species with ranges that extend into the Eastern Canadian Arctic, including *T. gracilis*, *T. arctica, T. ternata*, and *T. elongata* (GBIF 2022). However, the genus also includes species listed on databases as alien (Rius et al. 2022, Fofonoff et al. 2022, Molnar et al. 2008), of particular note is *T. inopinata*, listed on the National Risk Assessment as a potential invader to Canadian waters, including the Arctic region (Casas-Monroy et al. 2014). Due the presence of the species on the National Risk Assessment, the specimen was flagged for independent verification at Laval as a precaution, results are pending.

Laval was unable to differentiate the specimen from *Scrupocellaria* sp. due to the size of the specimen and recommended the identification be brought to the Family level (Candidae indet.). Bryozoans of the family Candidae, including *Scrupocellaria* and *Tricellaria* species, have ranges that include the Canadian Arctic and have previously been observed in Milne Port surveys (WoRMS 2022, GBIF 2022, Appendix 8A-1).

Detecting invasive species of bryozoans, like any other faunal group, requires reliable and comprehensive information about species identities and ranges (MacDonald 2022a, pers. comm.). This is particularly pronounced for bryozoan taxa in the Arctic, as the baseline communities have not been well-studied in the region. The majority of Canadian Arctic bryozoan community information heavily relies on a single survey performed by Powell (1968) for taxonomic and ecological information in which records representing 93 species were compiled from previous sampling missions that took place throughout Hudson Bay, the Labrador Sea, the Northwestern Passages, Queen Elizabeth Islands, and Beaufort Sea. A recent review of European Arctic bryozoan fauna (Denisenko, 2020) compiled 518 European records, which represented a 26.4% increase in registered taxa. Using rarefaction (as described by Clarke and Warwick, 1994), Denisenko demonstrated that bryozoan fauna are still underexplored, estimating species richness would increase by 10–30% with additional sampling effort, depending on the region,

and that the Canadian Archipelago stood out as being particularly under-studied. Additionally, this author indicated that bryozoans are possibly one of the most species-rich groups in the Arctic.

- **Based on the presence of at least four *Tricellaria* species in the eastern Canadian arctic and poor range descriptions for bryozoans in general, it is considered highly probable *Tricellaria* sp. would be one of the Canadian Arctic species rather than represent an introduction.**
- ***Tricellaria* sp. is designated No Risk and is not considered to be a taxon of concern for Milne Inlet. However, as a precaution, if *Tricellaria* sp. are identified in future studies, they will be treated with the same caution and sent for independent review. Should *Tricellaria inopinata* be identified in samples from Milne Port, the risk determination would be revised, and the taxon would be placed on the Watchlist and flagged for further review.**
- **Candidae indet. is designated No Risk, and is not considered a taxon of concern in Milne Port.**

8.5.3.4 Macroalgae

8.5.3.4.1 Rhodomela virgata

The red algae genus *Rhodomela* collected from permanent quadrats (as part of Chapter 5.0) was further identified to species level with DNA barcoding as *Rhodomela virgata*. Several species of the genus are considered to have a Canadian Artic distribution and found at Ragged Island on Baffin Island (*R. confervoides* and *R. lycopodiodes*) (based on morphological analysis presented in Küpper et al. 2016, Brown et al. 2011, Ellis and Wilce 1961), while DNA barcoding indicates that *R. virgata* records originate from Alaska (USA), Manitoba, Quebec, Nunavut and Prince Edward Island in Canada. In addition, several occurrence records exist from western Hudson Bay, the Baltic Sea, and the western Arctic Russia (GBIF 2022). While the aforementioned species all appear to be of Arctic distribution, the systematics of *R. confervoides* and *R*. *lycopodioides* is unclear with several WoRMS database (2022) designations as “forma (f.)”, or form, indicating a secondary rank classification that designates a group with a noticeable morphological deviation (for example, *Rhodomela confervoides* f. *lycopodioides*). It is thus apparent that the morphological assessment is questionable given the challenge of phenotypic plasticity and alternation of heteromorphic generations. Future specimens should be collected and sent to morphological assessment and DNA barcoding to resolve this taxon to species level.

- ***Rhodomela virgata* is designated as No Risk and is not considered a species of concern in Milne Inlet.**

8.6 Conclusions and Recommendations

The NIS/AIS program satisfies PC Nos. 87, 89, and 91. Detection is conducted at a surveillance level and designed to flag potential invasive or non-indigenous species introduced through Project-related vectors. Approximately 870 taxa (including 390 identifiable to species) have been observed in Milne Inlet through monitoring surveys to date. The vast majority of these taxa have been designated as “No Risk” and are not considered to be of concern.

Directed literature review of flagged taxa in 2021 has resulted in no taxa being added to the Project Watchlist for increased monitoring effort, such as review by specialists or DNA analysis. However, some independent taxonomic verifications remain pending. Molecular results confirmed the identification of *Marenzelleria wireni*, an Arctic species with a probable range that includes the Canadian Arctic. Molecular results for *Crassicorophium* sp. were largely inconclusive although they suggested that the specimens are most likely to be the Canadian Arctic species *Crassicorophium clarencense,* which was in agreement with morphological assessments.

Morphological assessment of *Tricellaria* sp. resulted in the designation being brought up to Family Candidae, a large bryozoan family with multiple species with natural ranges that include the Eastern Canadian Arctic.

Based on molecular results indicating *Pseudofabricia* sp. nr. *aberrans* are likely an undescribed species native to the Project area, this taxon has been removed from the Program Watchlist. Additionally, following extensive review of collection data, *Ampharete petersenae* was also removed from the Program Watchlist. The complete program watchlist is presented in Appendix 8F-2. As yet, there has not been confirmation of Project-related introduction of an NIS/AIS species documented at Milne Port and no species have been placed on the Trigger List to initiate rapid response. Based on the number of specimens flagged and sent for independent verification, monitoring is considered to be effective and functioning as intended.

It is recommended that sampling across multiple trophic levels continues in 2022, that the Milne Inlet Taxonomic Inventory continue to be expanded upon, and that all flagged specimens continue to be screened for known geographic ranges and AIS/NIS status. It is further recommended that efforts are continued to collect and review genetic evidence for *Marenzelleria* sp. and *Monocorophium* sp. (both, apart from *Marenzelleria wireni and Marenzelleria arctia*, flagged as High Risk but not Project-related), including targeted sampling to obtain specimens for DNA barcoding to further resolve these taxonomic groups in Milne Port.

8.7 Closure

We trust this information is sufficient for your needs at this time. Should you have any questions or concerns, please do not hesitate to contact Phil Rouget, on behalf of the undersigned, at 250-888-1100.

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APPENDIX 8A-1

Benthic Infauna Presence/Absence (2010 through 2021)

Appendix 8A-1

Benthic Infauna Taxa Presence/Absence from Survey Years 2010-2021

Phylum	Subphylum	Class	Subclass	Order	Family	Subfamily	Taxa	2010	2013	2015	2016	2017	2018	2019	2020	2021
Annelida	-	Clitellata	Hirudinea	-	-	-	Hirudinea indet.	-	-	-	-	-	-	Y	-	-
Annelida	-	Clitellata	Hirudinea	Rhynchobdellida	Piscicolidae	Platybdellinae	*Mysidobdella* sp.	-	-	-	-	X	-	-	X	-
Annelida	-	Clitellata	Oligochaeta	-	-	-	Oligochaete indet.	-	X	-	-	-	-	-	-	-
Annelida	-	Clitellata	Oligochaeta	Enchytraeida	Enchytraeidae	-	Enchytraeidae indet.	X	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	-	-	-	-	Polychaeta indet.	-	X	X	X	Y	-	-	-	-
Annelida	-	Polychaeta	Echiura	Echiuroidea	Echiuridae	-	*Echiurus echiurus*	-	X	X	-	X	X	-	X	-
Annelida	-	Polychaeta	Errantia	-	-	-	Errantia indet.	-	-	-	-	Y	-	-	-	-
Annelida	-	Polychaeta	Errantia	Eunicida	Dorvilleidae	-	*Ophryotrocha* sp.	-	-	-	-	-	-	-	X	-
Annelida	-	Polychaeta	Errantia	Eunicida	Dorvilleidae	-	*Parougia caeca*	-	-	-	-	-	X	X	X	-
Annelida	-	Polychaeta	Errantia	Eunicida	Lumbrineridae	-	Lumbrineridae indet.	-	-	-	-	-	-	Y	X	Y
Annelida	-	Polychaeta	Errantia	Eunicida	Lumbrineridae	-	*Lumbrineris fauchaldi*	-	-	-	-	-	-	-	-	X
Annelida	-	Polychaeta	Errantia	Eunicida	Lumbrineridae	-	*App 8A*	X	X	X	X	-	X	-	-	-
Annelida	-	Polychaeta	Errantia	Eunicida	Lumbrineridae	-	*Scoletoma fragilis*	X	-	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Errantia	Eunicida	Lumbrineridae	-	*Scoletoma impatiens*	-	-	-	X	X	X	X	X	X
Annelida	-	Polychaeta	Errantia	Eunicida	Lumbrineridae	-	*Scoletoma* sp.	-	-	-	-	-	X	Y	Y	Y
Annelida	-	Polychaeta	Errantia	Eunicida	Lumbrineridae	-	*Scoletoma tenuis*	-	X	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Errantia	Eunicida	Onuphidae	Hyalinoeciinae	*Nothria conchylega*	X	-	-	-	-	X	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Aphroditidae	-	Aphroditidae indet.	-	X	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Glyceridae	-	*Glycera capitata*	-	-	-	-	X	X	X	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Glyceridae	-	*Glycera* sp.	-	-	-	-	Y	X	Y	X	Y
Annelida	-	Polychaeta	Errantia	Phyllodocida	Hesionidae	-	Hesionidae indet.	-	-	-	-	Y	-	Y	-	Y
Annelida	-	Polychaeta	Errantia	Phyllodocida	Hesionidae	Ophiodrominae	*Gyptis* sp.	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Hesionidae	Psamathinae	Nereimyra aphroditoides	-	-	-	X	X	X	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Microphthalmidae	-	*Microphthalmus* sp.	-	-	-	-	-	X	-	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Nephtyidae	-	*Aglaophamus malmgreni*	-	-	-	-	-	-	X	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Nephtyidae	-	*Aglaophamus* sp.	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Nephtyidae	-	*Micronephthys cornuta*	-	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Nephtyidae	-	*Nephtys bucera*	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Nephtyidae	-	*Nephtys ciliata*	X	-	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Nephtyidae	-	*Nephtys paradoxa*	-	-	-	-	-	-	X	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Nephtyidae	-	*Nephtys* sp.	X	X	X	X	-	X	Y	Y	Y
Annelida	-	Polychaeta	Errantia	Phyllodocida	Nereididae	-	Nereididae indet.	X	-	-	-	Y	X	Y	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Nereididae	Nereidinae	*Nereis* sp.	-	-	-	X	Y	-	Y	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Nereididae	Nereidinae	*Nereis zonata*	-	X	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Pholoidae	-	*Pholoe longa*	X	X	-	-	-	-	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Pholoidae	-	*Pholoe minuta*	-	-	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Pholoidae	-	*Pholoe* sp.	X	X	X	X	Y	X	Y	Y	Y
Annelida	-	Polychaeta	Errantia	Phyllodocida	Pholoidae	-	*Pholoe tecta*	X	X	X	X	X	X	X	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	-	Phyllodocidae indet.	-	-	X	X	Y	-	-	-	Y
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Eteoninae	*Eteone barbata*	X	-	-	-	X	X	X	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Eteoninae	*Eteone flava*	-	-	-	-	X	X	X	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Eteoninae	*Eteone longa* complex	-	X	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Eteoninae	*Eteone* sp.	X	X	X	X	Y	X	Y	X	Y
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Eteoninae	*Eteone spilotus*	-	-	-	-	-	X		-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Eteoninae	*Eulalia bilineata*	-	-	-	-	-	-	-	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Eteoninae	*Eulalia* sp.	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Eteoninae	*Eumida* sp.	-	-	-	-	-	-	X	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Eteoninae	*Hypereteone* sp.	-	-	-	-	X	X	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Phyllodocinae	*Phyllodoce groenlandica*	X	-	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Phyllodocinae	*Phyllodoce mucosa*	-	-	X	X	X	-	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Phyllodocidae	Phyllodocinae	*Phyllodoce* sp.	-	-	-	-	Y	X	Y	-	Y
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	-	Polynoidae indet.	X	X	X	X	Y	X	-	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Bylgides groenlandicus*	X	-	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Bylgides promamme*	-	-	-	-	-	-	-	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Bylgides sarsi*	-	X	X	X	X	X	-	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Bylgides* sp.	-	-	-	-	-	Y	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Bylgides* sp. A	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Gattyana cirrhosa*	X	X	X	-	X	X	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Harmothoe extenuata*	-	X	X	X	X	X	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Harmothoe fragilis*	-	X	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Harmothoe imbricata*	X	X	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Harmothoe propinqua*	-	-	-	-	-	-	-	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Harmothoe rarispina*	-	-	-	-	-	-	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Harmothoe* sp.	X	X	X	X	Y	X	Y	X	Y

Appendix 8A-1

Benthic Infauna Taxa Presence/Absence from Survey Years 2010-2021

Phylum	Subphylum	Class	Subclass	Order	Family	Subfamily	Taxa	2010	2013	2015	2016	2017	2018	2019	2020	2021
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Hartmania moorei*	-	-	-	-	X	X	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Hartmania* sp.	-	X	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Hesperonoe* sp.	-	-	-	-	-	-	-	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Melaenis loveni*	-	-	-	-	-	X	-	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	*Neobylgides* sp.	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.	-	-	-	-	Y	-	Y	Y	Y
Annelida	-	Polychaeta	Errantia	Phyllodocida	Sphaerodoridae	-	*Ephesiella* sp.	-	-	-	-	-	-	-	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Sphaerodoridae	-	*Sphaerodoropsis biserialis*	-	-	-	-	-	-	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Sphaerodoridae	-	*Sphaerodoropsis minuta*	X	-	-	-	X	X	-	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Sphaerodoridae	-	*Sphaerodoropsis minutum*	-	-	-	-	-	-	X	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Syllidae	-	Syllidae indet.	X	X	X	X	Y	-	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Syllidae	Anoplosyllinae	*Streptospinigera niuqtuut*	-	-	-	-	-	X	X	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Syllidae	Anoplosyllinae	*Syllides* sp.	-	-	-	-	X	X	-	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Syllidae	Eusyllinae	*Eusyllis* sp.	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Syllidae	Eusyllinae	*Pionosyllis compacta*	-	-	-	-	-	-	X	X	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Syllidae	Eusyllinae	*Pionosyllis* sp.	-	-	-	-	-	X	-	Y	Y
Annelida	-	Polychaeta	Errantia	Phyllodocida	Syllidae	Exogoninae	*Exogone naidina*	-	-	-	-	-	-	X	X	X
Annelida	-	Polychaeta	Errantia	Phyllodocida	Syllidae	Exogoninae	*Exogone* sp.	-	X	-	-	X	X	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Syllidae	Exogoninae	*Exogone verugera*	X	X	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Errantia	Phyllodocida	Syllidae	Exogoninae	*Parexogone hebes*	-	X	-	-	-	X	X	-	-
Annelida	-	Polychaeta	Polychaeta incertae sedis	-	Oweniidae	-	*Galathowenia oculata*	-	-	X	-	X	X	X	X	X
Annelida	-	Polychaeta	Polychaeta incertae sedis	-	Oweniidae	-	*Myriochele danielsseni*	-	-	-	-	X	-	-	-	-
Annelida	-	Polychaeta	Polychaeta incertae sedis	-	Oweniidae	-	*Myriochele heeri*	-	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Polychaeta incertae sedis	-	Oweniidae	-	*Myriochele* sp.	-	-	-	-	Y	-	-	-	Y
Annelida	-	Polychaeta	Polychaeta incertae sedis	-	Oweniidae	-	*Owenia fusiformis*	X	X	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Polychaeta incertae sedis	-	Oweniidae	-	Oweniidae indet.	-	-	X	X	-	X	Y	-	Y
Annelida	-	Polychaeta	Polychaeta incertae sedis	-	Protodrilidae	-	*Protodrilus* sp.	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Capitellidae	-	*Capitella capitata* complex	X	X	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	-	Capitellidae	-	Capitellidae indet.	-	-	-	X	Y	-	Y	X	-
Annelida	-	Polychaeta	Sedentaria	-	Capitellidae	-	*Mediomastus ambiseta*	-	X	-	X	X	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Capitellidae	-	*Mediomastus* sp.	X	-	-	-	Y	X	Y	X	Y
Annelida	-	Polychaeta	Sedentaria	-	Capitellidae	-	*Notomastus latericeus*	-	-	-	-	X	X	X	-	-
Annelida	-	Polychaeta	Sedentaria	-	Capitellidae	-	*Notomastus* sp.	-	-	-	-	-	-	-	Y	Y
Annelida	-	Polychaeta	Sedentaria	-	Cossuridae	-	*Cossura longocirrata*	-	X	-	-	-	-	X	X	X
Annelida	-	Polychaeta	Sedentaria	-	Cossuridae	-	*Cossura* sp.	X	-	X	X	X	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	-	Maldanidae indet.	X	X	X	X	Y	X	Y	Y	Y
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	-	Maldanidae sp. A	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	-	Maldanidae sp. B	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	-	Maldanidae sp. C	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Euclymeninae	*Axiothella* sp.	-	-	-	-	-	-	-	X	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Euclymeninae	*Clymenura polaris*	-	-	-	-	-	-	X	X	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Euclymeninae	*Clymenura* sp.	-	-	-	-	X	X	Y	X	Y
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Euclymeninae	*Euclymene* sp.	-	-	-	-	X	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Euclymeninae	Euclymeninae indet.	-	-	-	-	Y	X	Y	X	Y
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Euclymeninae	*Heteroclymene robusta*	-	-	X	-	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Euclymeninae	*Microclymene* sp.	-	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Euclymeninae	*Praxillella gracilis*	-	-	-	-	-	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Euclymeninae	*Praxillella praetermissa*	-	-	-	-	X	X	X	X	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Euclymeninae	*Praxillella* sp.	-	-	-	X	Y	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Maldaninae	*Maldane sarsi*	X	X	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Nicomachinae	*Nicomache lumbricalis*	-	-	X	X	X	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Nicomachinae	*Nicomache* sp.	-	-	-	-	-	X	Y	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Nicomachinae	Nicomachinae indet.	-	-	-	-	-	-	Y	X	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Nicomachinae	*Petaloproctus* sp.	-	-	-	-	-	-	Y	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Nicomachinae	*Petaloproctus tenuis*	-	-	-	-	-	-	X	X	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Rhodininae	*Rhodine bitorquata*	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Rhodininae	*Rhodine gracilior*	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Maldanidae	Rhodininae	*Rhodine loveni*	-	-	-	-	X	-	X	X	-
Annelida	-	Polychaeta	Sedentaria	-	Opheliidae	-	Opheliidae indet.	X	-	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Opheliidae	Opheliinae	*Ophelia limacina*	X	X	X	X	X	-	X	-	-
Annelida	-	Polychaeta	Sedentaria	-	Opheliidae	Opheliinae	*Ophelia* sp.	-	-	-	-	-	-	-	-	Y
Annelida	-	Polychaeta	Sedentaria	-	Opheliidae	Ophelininae	*Ophelina acuminata*	X	-	X	X	X	X	X	X	-
Annelida	-	Polychaeta	Sedentaria	-	Opheliidae	Ophelininae	*Ophelina cylindricaudata*	-	-	-	-	-	X	X	X	-
Annelida	-	Polychaeta	Sedentaria	-	Opheliidae	Ophelininae	*Ophelina* sp.	-	-	-	-	Y	X	Y	Y	Y

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Benthic Infauna Taxa Presence/Absence from Survey Years 2010-2021

Phylum	Subphylum	Class	Subclass	Order	Family	Subfamily	Taxa	2010	2013	2015	2016	2017	2018	2019	2020	2021
Annelida	-	Polychaeta	Sedentaria	-	Orbiniidae	-	Orbiniidae indet.	-	-	-	-	Y	X	Y	X	-
Annelida	-	Polychaeta	Sedentaria	-	Orbiniidae	Orbiniinae	*Leitoscoloplos acutus*	-	X	X	X	X	X	X	-	-
Annelida	-	Polychaeta	Sedentaria	-	Orbiniidae	Orbiniinae	*Leitoscoloplos* sp.	X	-	-	-	X	X	-	X	Y
Annelida	-	Polychaeta	Sedentaria	-	Orbiniidae	Orbiniinae	*Scoloplos armiger*	X	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	-	Orbiniidae	Orbiniinae	*Scoloplos* sp.	-	X	X	-	Y	X	Y	Y	Y
Annelida	-	Polychaeta	Sedentaria	-	Paraonidae	-	*Aricidea (Acmira) catherinae*	-	-	-	-	-	-	X	-	-
Annelida	-	Polychaeta	Sedentaria	-	Paraonidae	-	*Aricidea (Strelzovia) antennata*	-	-	-	-	-	-	X	X	-
Annelida	-	Polychaeta	Sedentaria	-	Paraonidae	-	*Aricidea catherinae*	-	X	-	-	X	-	-	X	-
Annelida	-	Polychaeta	Sedentaria	-	Paraonidae	-	*Aricidea hartmanae*	-	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	-	Paraonidae	-	*Aricidea minuta*	-	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	-	Paraonidae	-	*Aricidea nolani*	-	X	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	-	Paraonidae	-	*Aricidea* sp.	X	X	-	X	Y	X	Y	X	Y
Annelida	-	Polychaeta	Sedentaria	-	Paraonidae	-	*Aricidea* sp. A	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Paraonidae	-	Paraonidae indet.	-	X	X	X	Y	X	Y	Y	-
Annelida	-	Polychaeta	Sedentaria	-	Paraonidae	-	*Paraonides* sp.	-	-	-	-	-	-	-	X	-
Annelida	-	Polychaeta	Sedentaria	-	Paraonidae	-	*Paraonis* sp.	X	-	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	-	Scalibregmatidae	-	*Polyphysia baffinensis*	X	-	-	-	-	-	-	X	X
Annelida	-	Polychaeta	Sedentaria	-	Scalibregmatidae	-	*Polyphysia crassa*	-	-	-	-	X	X	-	X	-
Annelida	-	Polychaeta	Sedentaria	-	Scalibregmatidae	-	*Polyphysia* sp.	-	-	-	-	-	-	Y	-	-
Annelida	-	Polychaeta	Sedentaria	-	Scalibregmatidae	-	*Scalibregma inflatum*	X	X	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	-	Scalibregmatidae	-	Scalibregmatidae indet.	-	-	-	-	Y	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Fabriciidae	-	Fabriciidae indet.	-	-	-	-	X	-	Y	X	Y
Annelida	-	Polychaeta	Sedentaria	Sabellida	Fabriciidae	-	*Manayunkia aesturiana*	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Fabriciidae	-	*Pseudofabricia* sp. nr. *aberrans*	-	-	-	-	-	-	X	X	X
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	-	Sabellid sp. A	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	-	Sabellid sp. B	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	-	Sabellid sp. F	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	-	Sabellid sp. G	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	-	Sabellidae indet.	-	X	X	X	Y	X	Y	Y	Y
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	-	Sabellidae sp. 3	-	-	-	-	-	-	Y	Y	X
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	-	Sabellidae sp. 4	-	-	-	-	-	-	Y	Y	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	-	Sabellidae sp. H	-	-	-	-	X	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	-	Sabellidae sp. I	-	-	-	-	X	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	-	Sabellidae sp. J	-	-	-	-	X	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Myxicolinae	*Chone duneri*	-	-	-	-	X	X	-	X	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Myxicolinae	*Chone* sp.	X	-	-	-	-	-	-	-	X
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Bispira* sp.	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Branchiomma* sp.	-	-	-	-	X	X	-	X	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Dialychone* sp.	-	-	-	-	X	X	X	X	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Dialychone* sp. 1	-	-	-	-	-	-	X	X	X
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Dialychone* sp. 3	-	-	-	-	-	-	-	Y	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Dialychone* sp. A	-	-	-	-	Y	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Dialychone* sp. B	-	-	-	-	X	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Euchone analis*	-	-	-	-	-	-	X	X	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Euchone incolor*	-	X	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Euchone papillosa*	X	-	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Euchone rubrocincta*	-	-	-	-	X	X	X	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Euchone* sp.	-	-	X	X	-	X	Y	X	Y
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Euchone* sp. 1	-	-	-	-	-	-	-	Y	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Hypsicomus* sp.	-	-	-	-	X	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Paradialychone harrisae*	-	-	-	-	X	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Potamilla neglecta*	-	-	X	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Sabellidae	Sabellinae	*Pseudopotamilla reniformis*	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Serpulidae	-	Serpulidae indet.	X	X	X	X	-	-	Y	-	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Serpulidae	Spirorbinae	*Bushiella (Jugaria) quadrangularis*	-	-	-	-	X	-	-	X	-
Annelida	-	Polychaeta	Sedentaria	Sabellida	Serpulidae	Spirorbinae	*Bushiella* sp.	-	-	-	-	-	-	-	-	Y
Annelida	-	Polychaeta	Sedentaria	Sabellida	Serpulidae	Spirorbinae	*Pileolaria* sp.	-	-	-	-	X	X	-	-	X
Annelida	-	Polychaeta	Sedentaria	Sabellida	Serpulidae	Spirorbinae	Spirorbinae indet.	-	-	-	-	X	X	-	X	-
Annelida	-	Polychaeta	Sedentaria	Spionida	Apistobranchidae	-	*Apistobranchus* sp.	-	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Dipolydora caulleryi*	-	-	-	-	X	X	X	X	-
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Dipolydora concharum*	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Dipolydora quadrilobata*	-	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Dipolydora socialis*	-	-	-	-	-	X	X	-	-
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Dipolydora* sp.	-	-	-	-	Y	X	-	X	-

Appendix 8A-1

Benthic Infauna Taxa Presence/Absence from Survey Years 2010-2021

Phylum	Subphylum	Class	Subclass	Order	Family	Subfamily	Taxa	2010	2013	2015	2016	2017	2018	2019	2020	2021
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Laonice cirrata*	-	-	-	-	-	X	X	X	-
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Marenzelleria* sp.	-	-	-	X	X	X	-	-	Y
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Marenzelleria viridis*	-	-	-	-	-	-	X	X	-
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Polydora* sp. complex	X	X	-	-	X	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Prionospio (Prionospio)* sp.	-	-	-	-	-	-	-	Y	-
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Prionospio cirrifera*	-	-	-	-	X	X	-	X	-
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Prionospio* sp.	-	-	-	-	Y	X	Y	Y	Y
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Prionospio steenstrupi*	-	X	X	X	X	X	X	-	-
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Pygospio elegans*	-	-	-	-	-	-	X	X	X
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Pygospio* sp.	-	X	-	-	X	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Scolelepis* sp.	-	-	-	-	-	X	-	X	X
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Spio filicornis*	X	X	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	*Spio* sp.	-	-	-	-	-	-	-	Y	Y
Annelida	-	Polychaeta	Sedentaria	Spionida	Spionidae	-	Spionidae indet.	X	X	X	X	Y	X	Y	Y	Y
Annelida	-	Polychaeta	Sedentaria	Spionida	Trochochaetidae	-	*Trochochaeta watsoni*	-	-	-	-	X	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	-	Ampharetidae indet.	X	X	X	X	Y	-	Y	X	Y
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Ampharete borealis*	-	-	-	-	-	-	X	X	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Ampharete finmarchica*	-	-	-	-	-	-	-	X	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Ampharete oculata*	-	-	X	-	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Ampharete petersenae*	-	-	-	-	-	-	-	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Ampharete* sp.	-	X	-	X	Y	X	Y	X	Y
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Ampharete vega*	-	-	-	-	X	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	Ampharetid sp. B	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	Ampharetid sp. E	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Amphicteis gunneri*	-	X	X	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Amphicteis sundevalli*	X	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Anobothrus gracilis*	-	-	-	X	-	-	-	X	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Lysippe labiata*	-	-	X	X	X	X	X	X	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Samytha* sp.	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Ampharetidae	Ampharetinae	*Sosane* sp. nr. *wireni*	-	-	-	-	-	-	X	X	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Cirratulidae	-	*Aphelochaeta marioni*	-	X	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Cirratulidae	-	*Aphelochaeta* sp.	-	-	-	-	X	X	Y	X	Y
Annelida	-	Polychaeta	Sedentaria	Terebellida	Cirratulidae	-	*Chaetozone bathyala*	-	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Cirratulidae	-	*Chaetozone careyi*	-	-	-	-	X	X	-	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Cirratulidae	-	*Chaetozone pigmentata*	-	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Cirratulidae	-	*Chaetozone setosa* complex	-	X	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Cirratulidae	-	*Chaetozone* sp.	-	-	-	-	Y	X	Y	X	Y
Annelida	-	Polychaeta	Sedentaria	Terebellida	Cirratulidae	-	Cirratulidae indet.	X	X	X	X	Y	X	Y	X	Y
Annelida	-	Polychaeta	Sedentaria	Terebellida	Cirratulidae	-	Cirratulidae sp. A	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Cirratulidae	-	*Kirkegaardia* sp.	-	-	-	-	-	X	-	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Cirratulidae	-	*Tharyx* sp.	-	-	-	-	X	X	X	X	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Flabelligeridae	-	*Brada villosa*	-	X	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Flabelligeridae	-	*Diplocirrus hirsutus*	-	-	X	X	-	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Flabelligeridae	-	*Flabelligera affinis*	-	-	-	X	-	-	X	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Flabelligeridae	-	Flabelligeridae indet.	-	-	X	-	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Melinnidae	-	*Melinna elisabethae*	X	X	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Melinnidae	-	*Melinna* sp.	X	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Pectinariidae	-	*Cistenides granulata*	X	X	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Pectinariidae	-	*Cistenides hyperborea*	X	-	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Pectinariidae	-	*Pectinaria* sp.	X	X	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	-	Terebellidae indet.	-	X	X	X	Y	X	Y	Y	Y
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Amaeana* sp.	-	-	-	-	-	X	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Lanassa* sp.	-	-	-	-	-	-	Y	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Lanassa venusta venusta*	-	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Laphania boecki*	-	-	-	X	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Leaena ebranchiata*	-	-	-	-	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Neoamphitrite affinis*	-	-	-	-	X	X	X	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Nicolea venustula*	-	X	-	-	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Paramphitrite birulai*	-	-	-	-	-	-	-	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Pista cristata*	-	-	-	X	-	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Pista maculata*	X	X	X	X	X	X	X	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Polycirrus medusa*	-	-	-	-	-	-	X	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Polycirrus* sp. complex	X	X	-	X	X	X	Y	Y	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Proclea graffii*	-	-	-	-	-	X	-	-	-

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Phylum	Subphylum	Class	Subclass	Order	Family	Subfamily	Taxa	2010	2013	2015	2016	2017	2018	2019	2020	2021
Annelida	-	Polychaeta	Sedentaria	Terebellida	Terebellidae	Terebellinae	*Amphitrite cirrata*	-	-	-	-	-	-	-	X	X
Annelida	-	Polychaeta	Sedentaria	Terebellida	Trichobranchidae	-	*Terebellides reishi*	-	-	-	-	X	-	-	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Trichobranchidae	-	*Terebellides* sp.	-	-	-	-	Y	X	Y	Y	Y
Annelida	-	Polychaeta	Sedentaria	Terebellida	Trichobranchidae	-	*Terebellides stroemii*	X	X	X	X	X	-	X	-	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Trichobranchidae	-	Trichobranchidae indet.	X	-	-	-	-	-	-	Y	-
Annelida	-	Polychaeta	Sedentaria	Terebellida	Trichobranchidae	-	*Trichobranchus glacialis*	X	-	-	-	X	X	X	X	-
Annelida	-	Polychaeta/Archiannelida	Polychaeta incertae sedis	Archiannelida	-	-	Archiannelid indet.	-	X	-	-	-	-	-	-	-
Annelida		Clitellata	Oligochaeta	Tubificida	Naididae	-	Naididae indet.	-	-	-	-	-	-	-	-	X
Arthropoda	Chelicerata	Arachnida	Acari	-	-	-	Acari indet.	X	X	-	-	-	-	X	X	-
Arthropoda	Chelicerata	Arachnida	Acari	Trombidiformes	Halacaridae	-	Halacaridae indet.	-	-	-	-	X	X	X	X	-
Arthropoda	Chelicerata	Pycnogonida	-	-	-	-	Pycnogonida indet.	X	-	X	-	X	-	-	-	-
Arthropoda	Chelicerata	Pycnogonida	-	Pantopoda	Ammotheidae	-	*Achelia spinosa*	-	-	-	X	-	-	-	-	-
Arthropoda	Chelicerata	Pycnogonida	-	Pantopoda	Ammotheidae	-	*Achelia* sp.	-	-	-	-	X	-	-	-	-
Arthropoda	Chelicerata	Pycnogonida	-	Pantopoda	Nymphonidae	-	*Nymphon hirtipes*	-	-	-	-	-	-	X	X	-
Arthropoda	Chelicerata	Pycnogonida	-	Pantopoda	Nymphonidae	-	*Nymphon* sp.	-	-	-	-	X	X	-	X	Y
Arthropoda	Crustacea	Hexanauplia	-	-	-	-	Cirripedia indet.	-	-	X	X	-	-	-	-	-
Arthropoda	Crustacea	Hexanauplia	Copepoda	-	-	-	Copepoda indet.	-	-	-	-	-	-	-	Y	-
Arthropoda	Crustacea	Hexanauplia	Copepoda	Calanoida	-	-	Calanoida indet.	-	-	-	-	-	-	-	-	Y
Arthropoda	Crustacea	Hexanauplia	Copepoda	Cyclopoida	-	-	Cyclopoida indet.	-	-	-	-	X	X	X	X	X
Arthropoda	Crustacea	Hexanauplia	Copepoda	Harpacticoida	-	-	Harpacticoida indet.	X	X	-	X	X	X	X	X	X
Arthropoda	Crustacea	Hexanauplia	Thecostraca	Sessilia	-	-	Balanomorpha indet.	-	-	-	-	X	X	X	X	X
Arthropoda	Crustacea	Hexanauplia	Thecostraca	Sessilia	Archaeobalanidae	Semibalabinae	*Semibalanus balanoides*	X	-	-	-	-	-	-	-	-
Arthropoda	Crustacea	Hexanauplia	Thecostraca	Sessilia	Balanidae	Balaninae	*Balanus* sp.	X	-	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	-	-	Amphipoda indet.	X	X	X	X	Y	X	X	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Acanthonotozomatidae	-	Acanthonotozoma inflatum	-	-	-	-	-	-	X	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ampeliscidae	-	*Ampelisca eschrichtii*	-	-	X	X	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ampeliscidae	-	*Ampelisca* sp.	-	-	X	X	-	-	Y	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ampeliscidae	-	Ampeliscidae indet.	-	-	-	X	-	X	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ampeliscidae	-	*Byblis gaimardii*	X	-	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ampeliscidae	-	*Byblis* sp.	-	-	X	X	X	X	Y	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ampeliscidae	-	*Haploops* sp.	-	-	X	X	-	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ampeliscidae	-	*Haploops tubicola*	X	X	-	X	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Amphilochidae	-	Amphilochidae indet.	-	-	-	-	Y	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Amphilochidae	-	*Amphilochus hamatus*	-	-	-	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Amphilochidae	-	*Amphilochus* sp.	-	-	-	-	-	X	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Aoridae	-	Aoridae indet.	-	-	-	-	-	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Atylidae	Atylinae	*Atylus carinatus*	X	X	X	X	X	X	X	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Atylidae	Atylinae	*Atylus* sp.	-	-	-	-	-	-	-	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Atylidae	Nototropiinae	*Nototropis* sp.	-	-	X	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Calliopiidae	-	*Apherusa jurinei*	-	X	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Calliopiidae	-	*Apherusa megalops*	-	X	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Calliopiidae	-	Calliopiidae indet.	-	-	-	-	X	X	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	-	Corophiidae indet.	-	-	-	X	-	X	Y	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiinae	*Corophium* sp.	X	X	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiinae	*Crassicorophium bonellii*	-	X	-	-	X	X	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiinae	*Crassicorophium clarencense*	-	-	-	-	-	-	-	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiinae	*Crassicorophium* sp.	-	-	-	-	-	-	-	-	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiinae	*Monocorophium insidiosum*	-	X	-	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Corophiinae	*Monocorophium* sp.	-	-	-	-	Y	X	Y	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Protomedeiinae	*Protomedeia fasciata*	-	X	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Corophiidae	Protomedeiinae	*Protomedeia* sp.	-	-	-	-	X	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dexaminidae	Dexamininae	*Dexamine* sp.	-	-	-	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dexaminidae	Prophliantinae	*Guernea nordenskioldi*	X	X	X	X	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dulichiidae	-	*Dulichia* sp.	-	-	-	-	-	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dulichiidae	-	Dulichiidae indet.	-	-	-	-	-	-	-	-	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Dulichiidae	-	*Dyopedos* sp.	-	-	-	-	X	X	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Eusiridae	-	*Rhachotropis aculeata*	X	-	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Eusiridae	-	*Rhachotropis helleri*	-	-	-	-	X	X	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Eusiridae	-	*Rhachotropis oculata*	-	X	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Eusiridae	-	*Rhachotropis* sp.	-	-	-	-	Y	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	-	*Gammarus oceanicus*	-	X	-	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	-	*Gammarus setosus*	-	-	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	-	*Gammarus* sp.	-	X	X	X	-	X	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Hyperiidae	-	*Themisto libellula**	-	-	-	-	-	-	-	X	-

Appendix 8A-1

Benthic Infauna Taxa Presence/Absence from Survey Years 2010-2021

Phylum	Subphylum	Class	Subclass	Order	Family	Subfamily	Taxa	2010	2013	2015	2016	2017	2018	2019	2020	2021
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Hyperiidae	-	*Themisto* sp.	-	-	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ischyroceridae	-	Ischyroceridae indet.	X	-	-	-	-	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ischyroceridae	Ischyrocerinae	*Ischyrocerus anguipes*	-	X	X	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Ischyroceridae	Ischyrocerinae	*Ischyrocerus* sp.	-	-	X	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Lysianassidae	-	Lysianassidae indet.	X	-	X	-	Y	-	Y	-	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Lysianassidae	-	Lysianassoidea indet.	-	-	-	-	Y	X	Y	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Melphidippidae	-	*Melphidippa* sp.	-	-	-	-	-	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Munnopsidae	Eurycopinae	*Eurycope* sp.	-	-	-	-	-	X	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Aceroides latipes*	-	-	-	-	-	-	X	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Aceroides* sp.	-	-	-	-	-	X	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Arrhis* sp.	-	-	-	-	-	X	X	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Bathymedon obtusifrons*	-	-	-	X	X	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Bathymedon* sp.	-	-	-	-	-	-	-	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Deflexilodes* sp.	-	-	-	-	-	-	-	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Deflexilodes tesselatus*	-	X	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Monoculodes latimanus*	-	X	-	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Monoculodes* sp.	X	X	X	X	Y	X	Y	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Monoculopsis longicornis*	-	X	-	X	X	-	X	-	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Monoculopsis* sp.	-	-	-	-	-	-	Y	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Oediceros borealis*	-	X	X	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	Oedicerotidae indet.	X	X	X	X	Y	X	Y	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Paroediceros lynceus*	X	X	X	X	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Paroediceros* sp.	-	X	-	-	-	-	-	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Rostroculodes borealis*	-	-	X	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Rostroculodes kroyeri*	-	-	X	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Rostroculodes longirostris*	-	-	-	-	X	-	-	-	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Rostroculodes* sp.	-	-	-	-	Y	X	Y	Y	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Westwoodilla caecula*	-	-	X	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	-	*Westwoodilla* sp.	-	X	-	X	X	X	-	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Opisidae	-	*Opisa eschrichti*	-	-	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Opisidae	-	*Opisa* sp.	-	-	-	-	-	-	-	-	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Phoxocephalidae	Harpiniinae	*Harpinia serrata*	X	-	X	X	X	X	-	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Phoxocephalidae	Harpiniinae	*Harpinia* sp.	-	-	X	X	Y	X	X	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Phoxocephalidae	Phoxocephalinae	*Phoxocephalus holbolli*	-	-	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Podoceridae	-	Podoceridae indet.	-	-	-	-	-	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Pontoporeiidae	-	*Monoporeia affinis*	X	X	X	X	X	X	X	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Pontoporeiidae	-	*Pontoporeia femorata*	X	X	X	X	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Pontoporeiidae	-	Pontoporeiidae indet.	-	-	-	-	Y	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Scopelocheiridae	Scopelocheirinae	*Scopelocheirus hopei*	-	-	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Stenothoidae	-	*Hardametopa nasuta*	-	-	-	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Stenothoidae	-	*Metopa* sp.	-	X	-	-	-	-	X	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Stenothoidae	-	Stenothoidae indet.	X	-	-	X	Y	X	X	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Synopiidae	-	*Tiron spiniferus*	-	-	-	-	-	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Tryphosidae	-	*Gronella groenlandica*	-	X	-	X	X	X	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Tryphosidae	-	*Hippomedon denticulatus*	-	-	X	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Tryphosidae	-	*Hippomedon propinqvus*	-	-	-	-	-	-	-	-	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Tryphosidae	-	*Hippomedon serratus*	-	-	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Tryphosidae	-	*Hippomedon* sp.	-	-	-	-	-	-	Y	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Tryphosidae	-	*Orchomene macroserratus*	X	-	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Tryphosidae	-	*Orchomene* sp.	-	-	-	-	X	X	Y	Y	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Tryphosidae	-	*Orchomenella minuta*	-	X	-	X	-	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Tryphosidae	-	*Orchomenella pinguis*	-	-	-	X	X	X	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Tryphosidae	-	*Orchomenella* sp.	-	X	-	X	-	-	Y	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Tryphosidae	-	Tryphosidae indet.	-	-	-	-	-	-	Y	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Anonyx laticoxae*	-	-	-	-	-	-	X	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Anonyx lilljeborgi*	-	-	-	-	-	-	-	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Anonyx nugax*	X	X	X	X	X	-	X	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Anonyx ochoticus*	-	-	-	X	-	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Anonyx pacificus*	-	-	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Anonyx sarsi*	-	-	X	X	X	X	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Anonyx* sp.	-	X	X	X	Y	X	Y	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Menigrates obtusifrons*	-	-	-	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Onisimus barentsi Group*	-	-	-	-	X	X	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Onisimus brevicaudatus*	-	-	-	-	-	X	-	-	-

Appendix 8A-1

Benthic Infauna Taxa Presence/Absence from Survey Years 2010-2021

Phylum	Subphylum	Class	Subclass	Order	Family	Subfamily	Taxa	2010	2013	2015	2016	2017	2018	2019	2020	2021
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Onisimus litoralis*	-	-	X	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Onisimus normani*	-	-	X	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Onisimus plautus*	-	-	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	*Onisimus* sp.	X	-	-	-	Y	X	Y	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	-	Uristidae indet.	-	-	-	-	Y	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	-	-	Cumacea indet.	-	X	X	X	Y	X	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Bodotriidae	Bodotriinae	*Cyclaspis longicaudata*	X	-	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Brachydiastylis resima*	X	X	X	X	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	Diastylidae indet.	-	-	-	-	Y	X	Y	-	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Diastylis alaskensis*	-	-	-	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Diastylis bradyi*	-	-	-	-	X	X	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Diastylis echinata*	-	-	X	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Diastylis goodsiri*	X	-	X	-	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Diastylis lucifera*	-	-	X	-	X	X	-	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Diastylis rathkei*	X	X	X	-	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Diastylis scorpiodes*	X	-	X	X	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Diastylis sculpta*	-	X	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Diastylis* sp.	-	X	-	X	Y	X	Y	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Diastylis spinulosa*	X	-	X	-	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Diastylidae	-	*Diastyloides biplicatus*	-	-	-	-	X	X	-	-	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Lampropidae	-	*Hemilamprops cristatus*	-	-	-	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Lampropidae	-	Lampropidae indet.	-	-	X	-	Y	X	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Lampropidae	-	*Lamprops fuscatus*	X	X	X	X	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Lampropidae	-	*Lamprops* sp.	-	-	X	X	-	-	-	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Leuconidae	-	*Eudorella emarginata*	-	-	X	X	-	-	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Leuconidae	-	*Eudorella* sp.	X	-	X	X	Y	-	Y	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Leuconidae	-	*Eudorella truncatula*	-	-	X	X	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Leuconidae	-	*Eudorellopsis* sp.	X	-	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Leuconidae	-	*Leucon nasica*	-	-	-	-	-	-	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Leuconidae	-	*Leucon nasicoides*	X	X	X	X	X	-	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Leuconidae	-	*Leucon* sp.	-	-	X	-	Y	X	Y	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Leuconidae	-	Leuconidae indet.	-	-	-	-	Y	X	Y	-	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Nannastacidae	-	*Campylaspis rubicunda*	-	-	-	-	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Nannastacidae	-	*Campylaspis* sp.	-	-	-	-	Y	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Cumacea	Nannastacidae	-	Nannastacidae indet.	-	-	-	-	-	-	-	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Crangonidae	-	Crangonidae indet.	-	-	-	-	-	-	-	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Crangonidae	-	*Sabinea septemcarinata*	X	-	X	-	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Crangonidae	-	*Sabinea* sp.	-	-	-	-	-	-	-	-	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Crangonidae	-	*Sclerocrangon boreas**	-	-	-	X	X	X	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Crangonidae	-	*Sclerocrangon* sp.	-	-	-	-	-	-	-	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Thoridae	-	*Lebbeus polaris*	X	-	-	-	-	X	X	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Decapoda	Thoridae	-	*Lebbeus* sp.	-	-	-	-	-	-	Y	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	-	-	Asellota indet.	-	-	-	-	Y	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	-	-	Isopoda indet.	-	-	-	-	-	-	-	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	-	-	Isopoda sp. A	-	-	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Desmosomatidae	-	Desmosomatidae indet.	-	-	-	-	X	-	-	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Desmosomatidae	Desmosomatinae	*Desmosoma* sp.	-	X	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Desmosomatidae	Desmosomatinae	*Eugerda* sp.	X	-	-	-	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Gnathiidae	-	*Gnathia maxillaris*	-	-	-	X	-	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Gnathiidae	-	*Gnathia* sp.	X	X	-	-	X	-	Y	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Gnathiidae	-	Gnathiidae indet.	-	-	-	-	Y	X	Y	X	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Paramunnidae	-	*Pleurogonium rubicundum*	-	-	-	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Paramunnidae	-	*Pleurogonium* sp.	-	-	-	-	Y	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Isopoda	Paramunnidae	-	*Pleurogonium spinosissimum*	X	-	-	-	X	X	-	-	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	-	Mysida indet.	-	-	-	-	Y	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Mysinae	*Mysis mixta*	-	X	-	X	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Mysinae	*Mysis* sp.	-	X	-	-	-	X	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	-	-	Tanaidacea indet.	X	X	X	X	Y	X	Y	Y	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Akanthophoreidae	-	*Akanthophoreus gracilis*	-	-	-	-	X	-	-	-	-
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Akanthophoreidae	-	*Akanthophoreus* sp.	-	-	-	-	Y	X	Y	X	Y
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Pseudotanaidae	Pseudotanainae	*Pseudotanais* sp.	-	-	-	-	X	X	Y	Y	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Sphyrapodidae	Pseudosphyrapodinae	*Pseudosphyrapus anomalus*	X	-	-	X	X	X	X	X	X
Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Tanaidacea	Typhlotanaidae	-	*Typhlotanais* sp.	-	-	-	-	X	X	X	X	-
Arthropoda	Crustacea	Ostracoda	-	-	-	-	Ostracoda indet.	-	-	-	-	Y	-	-	Y	-

Appendix 8A-1

Benthic Infauna Taxa Presence/Absence from Survey Years 2010-2021

Phylum	Subphylum	Class	Subclass	Order	Family	Subfamily	Taxa	2010	2013	2015	2016	2017	2018	2019	2020	2021
Arthropoda	Crustacea	Ostracoda	Myodocopa	-	-	-	Myodocopa indet.	X	X	X	X	-	-	-	-	-
Arthropoda	Crustacea	Ostracoda	Myodocopa	Myodocopida	Philomedidae	Philomedinae	*Philomedes* sp.	-	-	-	-	X	X	X	X	X
Arthropoda	Crustacea	Ostracoda	Podocopa	Podocopida	Cytheridae	-	Cytheridae indet.	-	-	-	-	-	-	X	-	X
Arthropoda	Crustacea	Ostracoda	Podocopa	Podocopida	Trachyleneridae	-	*Robertsonites tuberculatus*	-	-	-	-	X	-	-	-	-
Arthropoda	Hexapoda	Insecta	Pterygota	Coleoptera	Curculionidae	-	Curculionidae indet.	-	-	-	-	-	X	-	-	-
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	-	-	Diptera indet.	-	-	-	-	Y	-	-	-	-
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	-	Chironomidae indet.	X	-	-	-	-	X	-	-	-
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Chironominae	Chironominae indet.	X	-	-	-	-	-	-	-	-
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Diamesinae	*Diamesa* sp.	-	-	-	-	-	-	-	X	-
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Orthocladiinae	*Cricotopus/Orthocladius* sp. Complex	-	-	-	-	-	-	-	X	-
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Orthocladiinae	*Eukiefferiella* sp.	-	-	-	-	-	-	-	X	-
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Orthocladiinae	Orthocladiinae indet.	X	-	-	-	X	X	-	X	-
Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Empididae	Clinocerinae	*Clinocera* sp.	-	-	-	-	-	-	-	X	-
Brachiopoda	-	-	-	-	-	-	Brachiopoda indet.	-	-	-	-	-	-	-	-	X
Bryozoa	-	-	-	-	-	-	Bryozoa indet.	-	-	-	-	Y	X	-	X	Y
Bryozoa	-	Gymnolaemata	-	-	-	-	Gymnolaemata indet.	-	-	-	-	-	-	Y	-	-
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	-	-	Cheilostomatida indet.	-	-	-	-	-	-	Y	X	Y
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	-	-	Schizoporelloidea indet.	-	-	-	-	-	-	-	-	X
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Bitectiporidae	-	*Schizomavella* sp.	-	-	-	-	-	-	-	-	X
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Calloporidae	-	*Callopora* sp.	-	-	-	-	-	-	-	-	X
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Calloporidae	-	Calloporidae indet.	-	-	-	-	-	X	X	X	Y
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Calloporidae	-	*Cauloramphus* sp.	-	-	-	-	-	-	-	-	X
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Candidae	-	Candidae indet.	-	-	-	-	-	-	-	-	Y
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Candidae	-	*Scrupocellaria* sp.	-	-	-	-	-	X	-	-	-
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Candidae	-	*Tricellaria* sp.	-	-	-	-	-	-	-	-	X
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Cribrilinidae	-	*Cribrilina* sp.	-	-	-	-	-	-	-	-	X
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Epistomiidae	-	*Synnotum* sp.	-	-	-	-	X	-	-	-	-
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Escharellidae	-	*Escharella* sp.	-	-	-	-	-	-	X	X	X
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Eucrateidae	-	*Eucratea* sp.	-	-	-	-	-	-	-	X	-
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Exochellidae	-	*Escharoides* sp.	-	-	-	-	-	-	-	-	X
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Fatkullinidae	-	*Stomacrustula pachystega*	-	-	-	-	-	-	-	-	X
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Hippothoidae	-	*Celleporella hyalina*	-	-	-	-	X	-	-	-	-
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Myriaporidae	-	*Leieschara* sp.	-	-	-	-	-	X	-	X	-
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Smittinidae	-	*Pseudoflustra* sp.	-	-	-	-	-	-	-	-	X
Bryozoa	-	Gymnolaemata	-	Cheilostomatida	Smittinidae	-	*Smittina* sp.	-	-	-	-	-	-	-	-	X
Bryozoa	-	Gymnolaemata	-	Ctenostomatida	-	-	Ctenostomatida indet.	-	-	-	-	X	X	-	-	-
Bryozoa	-	Gymnolaemata	-	Ctenostomatida	Alcyonidiidae	-	*Alcyonidium* sp.	-	-	-	-	-	X	X	X	X
Bryozoa	-	Gymnolaemata	-	Ctenostomatida	Triticellidae	-	*Triticella* sp.	-	-	-	-	-	X	-	-	-
Bryozoa	-	Gymnolaemata	-	Ctenostomatida	Vesiculariidae	-	*Amathia* sp.	-	-	-	-	X	-	X	-	-
Bryozoa	-	Stenolaemata	-	-	-	-	Stenolaemata indet.	-	-	-	-	-	-	Y	-	-
Bryozoa	-	Stenolaemata	-	Cyclostomatida	Crisiidae	-	*Crisia* sp.	-	-	-	-	X	X	X	X	X
Bryozoa	-	Stenolaemata	-	Cyclostomatida	Oncousoeciidae	-	*Oncousoecia* sp.	-	-	-	-	-	-	X	-	-
Bryozoa	-	Stenolaemata	-	Cyclostomatida	Tubuliporidae	-	*Tubulipora* sp.	-	-	-	-	-	-	X	X	X
Chordata	Tunicata	-	-	-	-	-	Tunicata indet.	-	-	-	X	-	-	-	-	-
Chordata	Tunicata	Ascidiacea	-	-	-	-	Ascidiacea indet.	-	-	-	-	Y	-	X	X	Y
Chordata	Tunicata	Ascidiacea	-	Aplousobranchia	-	-	Aplousobranchia indet.	-	-	-	-	-	X	X	X	-
Chordata	Tunicata	Ascidiacea	-	Phlebobranchia	Ascidiidae	-	*Ascidia callosa*	-	X	-	-	-	-	-	-	-
Chordata	Tunicata	Ascidiacea	-	Phlebobranchia	Ascidiidae	-	*Ascidia* sp.	-	X	X	-	X	X	Y	X	Y
Chordata	Tunicata	Ascidiacea	-	Stolidobranchia	-	-	Stolidobranchia indet.	-	-	-	-	-	-	-	Y	-
Chordata	Tunicata	Ascidiacea	-	Stolidobranchia	Molgulidae	-	*Molgula* sp.	-	X	-	-	-	X	X	-	-
Chordata	Tunicata	Ascidiacea	-	Stolidobranchia	Pyuridae	-	*Boltenia echinata*	-	-	X	-	X	X	X	X	-
Chordata	Tunicata	Ascidiacea	-	Stolidobranchia	Pyuridae	-	*Boltenia* sp.	-	-	-	-	-	-	-	Y	-
Chordata	Tunicata	Ascidiacea	-	Stolidobranchia	Styelidae	-	*Polycarpa fibrosa*	-	-	-	-	X	X	-	X	-
Chordata	Tunicata	Ascidiacea	-	Stolidobranchia	Styelidae	-	*Polycarpa* sp.	-	-	-	-	-	-	Y	Y	Y
Chordata	Tunicata	Ascidiacea	-	Stolidobranchia	Styelidae	-	Styelidae indet.	-	-	-	-	-	-	Y	-	-
Chordata	Vertebrata	-	-	-	-	-	Pisces indet.	-	-	-	-	X	-	-	-	-
Chordata	Vertebrata	Actinopterygii	-	Perciformes	Zoarcidae	-	Zoarcidae indet.	-	-	-	-	-	-	X	-	-
Chordata	Vertebrata	Actinopterygii	-	Scorpaeniformes	Cottidae	-	Cottidae indet.	-	-	-	-	-	-	X	X	-
Cnidaria	-	Anthozoa	-	-	-	-	Anthozoa indet.	-	-	-	-	-	-	-	Y	-
Cnidaria	-	Anthozoa	Ceriantharia	Spirularia	Cerianthidae	-	*Cerianthus lloydii*	-	-	-	-	-	-	-	X	-
Cnidaria	-	Anthozoa	Hexacorallia	Actiniaria	-	-	Actiniaria indet.	-	-	-	-	-	-	-	Y	-
Cnidaria	-	Anthozoa	Hexacorallia	Actiniaria	Actiniidae	-	*Urticina* sp.	-	-	-	-	X	-	-	-	-
Cnidaria	-	Anthozoa	Hexacorallia	Actiniaria	Edwardsiidae	-	Edwardsiidae indet.	-	-	-	-	-	-	X	X	-
Cnidaria	-	Anthozoa	Hexacorallia	Actiniaria	Halcampidae	-	*Halcampa* sp.	-	-	-	-	-	-	-	X	-

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Phylum	Subphylum	Class	Subclass	Order	Family	Subfamily	Taxa	2010	2013	2015	2016	2017	2018	2019	2020	2021
Cnidaria	-	Anthozoa	Hexacorallia	Actiniaria	Hormathiidae	-	*Hormathia digitata*	-	-	-	-	X	-	-	-	-
Cnidaria	-	Anthozoa	Hexacorallia	Zoantharia	Parazoanthidae	-	*Parazoanthus* sp.	-	-	-	-	X	-	-	-	-
Cnidaria	-	Hydrozoa	-	-	-	-	Hydrozoa indet.	-	-	-	-	Y	-	Y	X	-
Cnidaria	-	Hydrozoa	-	Leptothecata	Campanulariidae	-	Campanulariidae indet.	-	-	-	-	-	-	-	-	Y
Cnidaria	-	Hydrozoa	-	Leptothecata	Campanulinidae	-	*Calycella* sp.	-	-	-	-	-	-	-	-	X
Cnidaria	-	Hydrozoa	Hydroidolina	Anthoathecata	-	-	Anthoathecata indet.	-	-	-	-	-	-	Y	X	-
Cnidaria	-	Hydrozoa	Hydroidolina	Anthoathecata	Bougainvilliidae	-	Bougainvilliidae indet.	-	-	-	-	X	X	-	X	-
Cnidaria	-	Hydrozoa	Hydroidolina	Anthoathecata	Corynidae	-	Corynidae indet.	-	-	-	-	-	-	X	-	-
Cnidaria	-	Hydrozoa	Hydroidolina	Leptothecata	-	-	Leptothecata indet.	-	-	-	-	-	-	-	Y	Y
Cnidaria	-	Hydrozoa	Hydroidolina	Leptothecata	Lafoeidae	-	*Lafoea* sp.	-	-	-	-	-	-	X	-	-
Cnidaria	-	Hydrozoa	Trachylinae	Limnomedusae	Monobrachiidae	-	*Monobrachium parasitum*	-	-	-	-	X	X	X	X	X
Echinodermata	Asterozoa	Asteroidea	-	Forcipulatida	Asteriidae	-	Asteriidae indet.	-	-	X	-	-	-	-	-	-
Echinodermata	Asterozoa	Ophiuroidea	-	-	-	-	Ophiuroidea indet.	-	-	X	-	-	-	Y	Y	Y
Echinodermata	Asterozoa	Ophiuroidea	Myophiuroidea	Amphilepidida	-	-	Amphilepidida indet.	-	-	-	-	-	-	-	X	-
Echinodermata	Asterozoa	Ophiuroidea	Myophiuroidea	Ophiurida	Ophiopyrgidae	-	*Ophiopleura borealis*	-	-	-	-	-	-	X	X	-
Echinodermata	Asterozoa	Ophiuroidea	Myophiuroidea	Ophiurida	Ophiuridae	-	Ophiuridae indet.	-	-	-	-	-	-	Y	Y	Y
Echinodermata	Asterozoa	Ophiuroidea	Myophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	*Ophiocten affinis*	-	-	-	-	-	X	X	X	X
Echinodermata	Asterozoa	Ophiuroidea	Myophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	*Ophiocten sericeum*	X	X	-	-	-	-	-	-	-
Echinodermata	Asterozoa	Ophiuroidea	Myophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	*Ophiura robusta*	X	-	X	X	X	X	X	X	X
Echinodermata	Asterozoa	Ophiuroidea	Myophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	*Ophiura sarsii*	X	X	X	X	X	X	X	X	X
Echinodermata	Asterozoa	Ophiuroidea	Myophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	*Ophiura* sp.*	-	-	X	-	Y	-	Y	Y	Y
Echinodermata	Echinozoa	Echinoidea	Euechinoidea	Camarodonta	Strongylocentrotidae	-	*Strongylocentrotus droebachiensis*	X	-	X	X	X	X	X	X	X
Echinodermata	Echinozoa	Echinoidea	Euechinoidea	Camarodonta	Strongylocentrotidae	-	*Strongylocentrotus pallidus*	-	-	-	-	-	-	-	X	-
Echinodermata	Echinozoa	Echinoidea	Euechinoidea	Camarodonta	Strongylocentrotidae	-	*Strongylocentrotus* sp.	-	X	-	-	Y	X	Y	Y	Y
Echinodermata	Echinozoa	Holothuroidea	-	-	-	-	Holothuroidea sp. A	-	-	-	-	X	X	-	-	-
Echinodermata	Echinozoa	Holothuroidea	Actinopoda	Dendrochirotida	Psolidae	-	*Psolus phantapus*	-	-	-	-	X	X	-	-	-
Echinodermata	Echinozoa	Holothuroidea	Actinopoda	Dendrochirotida	Psolidae	-	*Psolus* sp.	-	-	-	-	-	-	Y	-	-
Echinodermata	Echinozoa	Holothuroidea	Actinopoda	Molpadida	-	-	Molpadida indet.	-	-	-	-	X	X	-	-	-
Echinodermata	Echinozoa	Holothuroidea	Actinopoda	Molpadida	Eupyrgidae	-	*Eupyrgus scaber*	-	-	-	-	-	-	X	X	-
Echinodermata	Echinozoa	Holothuroidea	Paractinopoda	Apodida	-	-	Apodida indet.	-	-	-	-	-	-	Y	Y	-
Echinodermata	Echinozoa	Holothuroidea	Paractinopoda	Apodida	Myriotrochidae	-	*Myriotrochus rinkii*	-	-	-	X	-	-	X	X	X
Entoprocta	-	-	-	-	-	-	Entoprocta indet.	-	-	-	-	-	-	-	X	-
Entoprocta	-	-	-	Coloniales	Barentsiidae	-	*Barentsia* sp.	-	-	-	-	-	-	-	X	-
Hemichordata	-	Enteropneusta	-	-	-	-	Enteropneusta indet.	-	-	-	-	-	-	-	X	-
Mollusca	-	Bivalvia	-	-	-	-	Bivalvia indet.	-	X	X	X	Y	-	X	X	X
Mollusca	-	Bivalvia	-	-	-	-	Bivalvia sp. A	-	-	-	X	-	-	-	-	-
Mollusca	-	Bivalvia	-	Galeommatida	Lasaeidae	-	Lasaeidae indet.	-	-	-	-	-	-	-	-	X
Mollusca	-	Bivalvia	Autobranchia	-	Cuspidariidae	-	*Cuspidaria arctica*	-	-	X	-	-	-	-	-	-
Mollusca	-	Bivalvia	Autobranchia	-	Cuspidariidae	-	*Cuspidaria* sp.	X	-	-	-	-	X	-	X	Y
Mollusca	-	Bivalvia	Autobranchia	-	Lyonsiidae	-	*Lyonsia arenosa*	-	-	-	-	X	X	X	-	X
Mollusca	-	Bivalvia	Autobranchia	-	Periplomatidae	-	*Periploma aleuticum*	X	-	-	-	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	-	Thraciidae	-	*Thracia myopsis*	-	-	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	-	Thraciidae	-	*Thracia* sp.	-	-	-	-	Y	X	Y	-	Y
Mollusca	-	Bivalvia	Autobranchia	Adapedonta	Hiatellidae	-	*Hiatella arctica*	X	X	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	Arcida	Arcidae	-	*Bathyarca glacialis*	-	-	-	-	-	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	Cardiida	Cardiidae	Clinocardiinae	*Ciliatocardium ciliatum*	X	-	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	Cardiida	Cardiidae	Clinocardiinae	Clinocardiinae indet.	-	-	-	-	-	-	Y	-	-
Mollusca	-	Bivalvia	Autobranchia	Cardiida	Cardiidae	Clinocardiinae	*Serripes groenlandicus*	-	X	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	Cardiida	Cardiidae	Clinocardiinae	*Serripes* sp.	-	X	-	-	-	-	-	-	-
Mollusca	-	Bivalvia	Autobranchia	Cardiida	Cardiidae	-	Cardiidae indet.	-	-	-	-	Y	-	-	X	Y
Mollusca	-	Bivalvia	Autobranchia	Cardiida	Tellinidae	Macominae	*Limecola balthica*	-	-	X	X	X	X	X	-	-
Mollusca	-	Bivalvia	Autobranchia	Cardiida	Tellinidae	Macominae	*Macoma calcarea*	X	X	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	Cardiida	Tellinidae	Macominae	*Macoma moesta*	-	-	-	-	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	Cardiida	Tellinidae	Macominae	*Macoma* sp.	-	-	-	-	Y	X	-	-	Y
Mollusca	-	Bivalvia	Autobranchia	Cardiida	Tellinidae	Macominae	Macominae indet.	-	-	-	-	-	-	Y	Y	Y
Mollusca	-	Bivalvia	Autobranchia	Carditida	Astartidae	-	*Astarte borealis*	X	X	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	Carditida	Astartidae	-	*Astarte montagui*	X	-	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	Carditida	Astartidae	-	*Astarte* sp.	X	X	X	X	Y	X	Y	X	Y
Mollusca	-	Bivalvia	Autobranchia	Lucinida	Thyasiridae	-	*Axinopsida serricata**	-	-	-	-	X	-	X	-	-
Mollusca	-	Bivalvia	Autobranchia	Lucinida	Thyasiridae	-	*Axinopsida* sp.	-	-	-	-	-	-	Y	X	Y
Mollusca	-	Bivalvia	Autobranchia	Lucinida	Thyasiridae	-	*Thyasira flexuosa*	-	X	X	X	-	-	-	-	-
Mollusca	-	Bivalvia	Autobranchia	Lucinida	Thyasiridae	-	*Thyasira gouldi*	X	-	-	-	-	-	-	-	-
Mollusca	-	Bivalvia	Autobranchia	Lucinida	Thyasiridae	-	*Thyasira* sp.	-	-	-	-	X	X	Y	Y	Y
Mollusca	-	Bivalvia	Autobranchia	Lucinida	Thyasiridae	-	Thyasiridae indet.*	-	-	-	-	Y	X	Y	Y	Y

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Phylum	Subphylum	Class	Subclass	Order	Family	Subfamily	Taxa	2010	2013	2015	2016	2017	2018	2019	2020	2021
Mollusca	-	Bivalvia	Autobranchia	Myida	Myidae	-	*Mya arenaria*	-	-	X	X	-	-	-	-	-
Mollusca	-	Bivalvia	Autobranchia	Myida	Myidae	-	*Mya* sp.	-	-	-	-	Y	X	Y	Y	Y
Mollusca	-	Bivalvia	Autobranchia	Myida	Myidae	-	*Mya truncata*	X	X	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	Mytilida	Mytilidae	-	Mytilidae indet.	X	-	-	-	Y	X	Y	Y	Y
Mollusca	-	Bivalvia	Autobranchia	Mytilida	Mytilidae	Crenellinae	*Crenella faba*	X	X	X	X	X	X	-	-	-
Mollusca	-	Bivalvia	Autobranchia	Mytilida	Mytilidae	Crenellinae	*Crenella* sp.	-	X	-	-	-	-	-	-	-
Mollusca	-	Bivalvia	Autobranchia	Mytilida	Mytilidae	Dacrydiinae	*Dacrydium vitreum*	X	-	-	-	-	X	-	X	-
Mollusca	-	Bivalvia	Autobranchia	Mytilida	Mytilidae	Musculinae	*Musculus discors*	X	X	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	Mytilida	Mytilidae	Musculinae	*Musculus niger*	-	X	-	-	X	-	X	X	-
Mollusca	-	Bivalvia	Autobranchia	Mytilida	Mytilidae	Musculinae	*Musculus* sp.	X	-	-	-	Y	-	Y	X	Y
Mollusca	-	Bivalvia	Autobranchia	Mytilida	Mytilidae	Mytilinae	*Mytilus edulis*	-	X	-	-	-	-	-	-	-
Mollusca	-	Bivalvia	Autobranchia	Mytilida	Mytilidae	Mytilinae	*Mytilus* sp.	-	-	-	-	X	-	-	-	-
Mollusca	-	Bivalvia	Autobranchia	Pectinida	-	-	Pectinoidea indet.	-	-	-	-	Y	-	-	-	Y
Mollusca	-	Bivalvia	Autobranchia	Pectinida	Pectinidae	-	Pectinidae indet.	-	-	-	-	Y	X	-	X	-
Mollusca	-	Bivalvia	Autobranchia	Pectinida	Pectinidae	Pedinae	*Chlamys islandica*	-	-	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Autobranchia	Pectinida	Propeamussiidae	-	Propeamussiidae indet.	-	-	-	-	Y	X	Y	Y	Y
Mollusca	-	Bivalvia	Autobranchia	Pectinida	Propeamussiidae	-	*Similipecten greenlandicus*	X	-	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	-	-	Nuculanida indet.	-	-	-	-	-	-	Y	-	-
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	-	-	Nuculanoidea indet.	-	-	-	-	Y	X	-	X	Y
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	Nuculanidae	Nuculaninae	*Nuculana minuta*	-	X	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	Nuculanidae	Nuculaninae	*Nuculana pernula*	X	X	X	X	X	X	X	X	X
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	Nuculanidae	Nuculaninae	*Nuculana* sp.	-	-	X	-	Y	X	Y	Y	Y
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	Yoldiidae	-	*Portlandia arctica*	X	X	X	X	X	-	X	X	-
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	Yoldiidae	-	*Yoldiella frigida*	-	-	-	-	-	X	X	X	X
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	Yoldiidae	-	*Yoldiella intermedia*	-	-	-	-	-	X	X	-	X
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	Yoldiidae	-	*Yoldiella lenticula*	X	-	-	-	-	X	-	-	-
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	Yoldiidae	-	*Yoldiella nana*	X	-	-	-	-	-	-	-	-
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	Yoldiidae	-	*Yoldiella* sp.	-	-	-	-	-	-	-	Y	Y
Mollusca	-	Bivalvia	Protobranchia	Nuculanida	Yoldiidae	-	Yoldiidae indet.	-	-	-	-	Y	X	Y	Y	Y
Mollusca	-	Bivalvia	Protobranchia	Nuculida	Nuculidae	-	*Ennucula tenuis*	X	-	-	-	X	X	X	X	X
Mollusca	-	Bivalvia	Protobranchia	Nuculida	Nuculidae	-	*Nucula* sp.	-	-	X	-	-	-	-	-	-
Mollusca	-	Bivalvia	Protobranchia	Nuculida	Nuculidae	-	*Pronucula tenuis*	-	X	X	X	-	-	-	-	-
Mollusca	-	Caudofoveata	-	-	-	-	Caudofoveata indet.	-	-	-	-	-	-	-	Y	Y
Mollusca	-	Caudofoveata	-	Chaetodermatida	Chaetodermatidae	-	*Chaetoderma* sp.	-	-	X	X	X	X	X	X	X
Mollusca	-	Gastropoda	-	-	-	-	Gastropoda indet.	-	-	X	-	Y	X	Y	X	Y
Mollusca	-	Gastropoda	-	-	-	-	Gastropoda sp. A	-	-	-	X	-	-	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Capulidae	-	*Ariadnaria borealis*	-	-	X	X	X	X	X	X	X
Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Naticidae	-	*Naticidae (juvenile)*	-	-	X	-	-	-	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Naticidae	-	Naticidae indet.	-	-	-	-	-	-	Y	X	Y
Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Naticidae	Naticinae	*Cryptonatica affinis*	-	-	X	X	X	X	-	-	X
Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Naticidae	Naticinae	*Euspira pallida*	X	-	-	-	X	X	X	X	X
Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Naticidae	Polinicinae	*Bulbus* sp.	-	X	-	-	-	-	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Rissoidae	-	*Boreocingula castanea*	-	X	-	X	-	X	X	X	X
Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Rissoidae	-	Rissoidae indet.	-	-	-	-	X	X	Y	Y	Y
Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Skeneopsidae	-	*Skeneopsis planorbis*	-	X	-	-	-	-	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Littorinimorpha	Velutinidae	-	Velutinidae indet.	-	-	-	-	X	X	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Buccinidae	-	Buccinidae indet.	-	-	-	-	Y	X	Y	-	Y
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Buccinidae	-	*Buccinum ciliatum*	-	-	-	-	-	-	X	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Buccinidae	-	*Buccinum hydrophanum*	-	-	-	-	-	X	X	X	-
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Buccinidae	-	Colus sp.	-	-	-	-	X	X	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Buccinidae	-	*Volutopsius norwegicus*	-	-	-	-	X	X	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Cancellariidae	Admetinae	*Admete viridula*	-	-	-	X	-	X	X	X	-
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Columbellidae	-	Columbellidae indet.	-	-	-	-	-	X	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Mangeliidae	-	Mangeliidae indet.	-	-	-	-	-	-	Y	X	Y
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Mangeliidae	-	*Oenopota* sp.	-	-	-	X	-	X	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Mangeliidae	-	*Oenopota violacea*	-	X	X	X	-	-	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Mangeliidae	-	*Propebela* sp.	-	-	-	-	X	-	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Mangeliidae	-	*Propepela nobilis*	-	-	-	X	-	-	-	-	-
Mollusca	-	Gastropoda	Caenogastropoda	Neogastropoda	Turridae	-	Turridae indet.	X	-	-	-	X	-	-	-	-
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	-	-	Cephalaspidea indet.	-	-	-	-	Y	X	Y	X	Y
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	Cylichnidae	-	*Cylichna alba*	X	-	X	X	-	X	X	X	X
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	Cylichnidae	-	*Cylichna gouldi*	-	-	X	X	-	-	-	-	-
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	Cylichnidae	-	*Cylichna* sp.	-	-	-	-	X	X	Y	X	Y
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	Cylichnidae	-	Cylichnidae indet.	-	-	-	-	Y	X	Y	X	Y

Appendix 8A-1

Benthic Infauna Taxa Presence/Absence from Survey Years 2010-2021

Phylum	Subphylum	Class	Subclass	Order	Family	Subfamily	Taxa	2010	2013	2015	2016	2017	2018	2019	2020	2021
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	Cylichnidae	-	*Cylichnoides occultus*	X	-	-	-	X	X	X	X	-
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	Philinidae	Philininae	Philininae indet.	-	-	-	-	-	-	X	X	-
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	Retusidae	-	*Retusa obtusa*	-	X	-	-	-	-	-	-	-
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	Retusidae	-	*Retusa* sp.	-	-	-	-	-	-	-	Y	-
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	Retusidae	-	Retusidae indet.	-	X	-	-	-	-	-	-	-
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	Tornatinidae	-	*Acteocina canaliculata*	X	-	-	-	-	-	-	-	-
Mollusca	-	Gastropoda	Heterobranchia	Cephalaspidea	Tornatinidae	-	*Acteocina* sp.	-	-	-	-	X	-	X	X	-
Mollusca	-	Gastropoda	Patellogastropoda	-	-	-	Patellogastropoda indet.	-	X	X	-	Y	-	-	X	Y
Mollusca	-	Gastropoda	Patellogastropoda	-	Lepetidae	-	*Lepeta caeca*	X	X	X	X	X	X	X	X	X
Mollusca	-	Gastropoda	Patellogastropoda	-	Lottiidae	-	*Erginus rubellus*	-	-	-	-	-	-	X	-	-
Mollusca	-	Gastropoda	Patellogastropoda	-	Lottiidae	-	Lottiidae indet.	-	-	-	-	X	X	-	-	-
Mollusca	-	Gastropoda	Patellogastropoda	-	Lottiidae	-	*Testudinalia testudinalis*	X	X	X	-	-	X	-	-	-
Mollusca	-	Gastropoda	Vetigastropoda	Trochida	Colloniidae	Moelleriinae	*Moelleria costulata*	-	-	-	-	X	X	-	X	-
Mollusca	-	Gastropoda	Vetigastropoda	Trochida	Margaritidae	-	*Margarites groenlandicus*	-	X	X	X	X	X	X	-	X
Mollusca	-	Gastropoda	Vetigastropoda	Trochida	Margaritidae	-	*Margarites helicinus*	-	-	-	-	X	X	X	X	-
Mollusca	-	Gastropoda	Vetigastropoda	Trochida	Margaritidae	-	*Margarites olivaceus*	X	-	-	-	-	X	-	X	-
Mollusca	-	Gastropoda	Vetigastropoda	Trochida	Margaritidae	-	*Margarites* sp.	-	-	-	-	Y	X	Y	Y	-
Mollusca	-	Gastropoda	Vetigastropoda	Trochida	Trochidae	-	Trochidae indet.	X	-	-	-	X	X	-	-	-
Mollusca	-	Polyplacophora	-	-	-	-	Polyplacophora indet.	-	-	-	-	Y	-	-	-	-
Mollusca	-	Polyplacophora	Neoloricata	Chitonida	Tonicellidae	Tonicellinae	*Tonicella marmorea*	X	-	X	X	X	X	X	X	X
Mollusca	-	Scaphopoda	-	Gadilida	Gadilidae	-	Gadilidae indet.							Y	X	-
Mollusca	-	Scaphopoda	-	Gadilida	Gadilidae	-	*Siphonodentalium lobatum*	-	-	-	-	-	-	X	X	X
Mollusca	Aculifera	Aplacophora	-	-	-	-	Aplacophora indet.	-	-	-	-	X	X	-	-	-
Nematoda	-	-	-	-	-	-	Nematoda indet.	-	-	-	-	-	-	-	X	-
Nemertea	-	-	-	-	-	-	Nemertea indet.	-	X	X	X	Y	X	Y	X	Y
Nemertea	-	Hoplonemertea	-	-	-	-	Hoplonemertea indet.	-	-	-	-	-	-	Y	X	Y
Nemertea	-	Hoplonemertea	-	Monostilifera	Amphiporidae	-	Amphiporus sp.	-	-	-	-	-	-	-	X	-
Nemertea	-	Hoplonemertea	-	Monostilifera	Tetrastemmatidae	-	*Tetrastemma* sp.	-	-	-	-	X	-	X	-	-
Nemertea	-	Hoplonemertea	-	Monostilifera	Tetrastemmatidae	-	Tetrastemmatidae indet.	-	-	-	-	-	-	-	Y	-
Nemertea	-	Nemertea incertae sedis	-	-	-	-	Nermertea incertae sedis indet. (Anopla)	-	-	-	-	Y	X	-	-	-
Nemertea	-	Nemertea incertae sedis	-	-	-	-	Nermertea incertae sedis indet. (Enopla)	-	-	-	-	Y	X	-	-	-
Nemertea	-	Palaeonemertea	-	Archinemertea	Cephalotrichidae	-	*Cephalothrix* sp.	-	-	-	-	X	X	X	X	X
Nemertea	-	Palaeonemertea	-	Carinomiformes	Carinomidae	-	*Carinoma* sp.	-	-	-	-	-	X	-	X	-
Nemertea	-	Palaeonemertea	-	Tubulaniformes	Tubulanidae	-	*Tubulanus* sp.	-	-	-	-	-	X	X	X	-
Nemertea	-	Pilidiophora	-	Heteronemertea	-	-	Heteronemertea indet.	-	-	-	-	-	-	Y	-	Y
Nemertea	-	Pilidiophora	-	Heteronemertea	Lineidae	-	*Cerebratulus* sp.	-	X	X	-	X	X	X	X	-
Nemertea	-	Pilidiophora	-	Heteronemertea	Lineidae	-	Lineidae indet.	-	-	-	-	-	-	Y	X	Y
Nemertea	-	Pilidiophora	-	Heteronemertea	Lineidae	-	*Lineus* sp.	-	-	-	-	-	-	X	X	-
Platyhelminthes	-	-	-	-	-	-	Platyhelminthes indet.	-	-	-	-	X	X	-	-	-
Porifera	-	Calcarea	-	-	-	-	Calcarea indet.*	-	-	-	-	X	X	X	X	-
Porifera	-	Demospongiae	-	-	-	-	Demospongiae indet.	-	-	-	-	-	-	-	X	X
Priapulida	-	-	-	-	-	-	Priapulida indet.	-	X	-	-	-	-	Y	Y	Y
Priapulida	-	-	-	Prapulomorpha	Priapulidae	-	*Priapulus caudatus*	X	-	X	X	X	X	-	X	-
Priapulida	-	-	-	Prapulomorpha	Priapulidae	-	*Priapulus* sp.	-	-	-	-	Y	X	Y	Y	Y
Sipuncula	-	-	-	-	-	-	Sipuncula indet.	-	-	X	X	-	-	-	-	-
Sipuncula	-	Sipunculidea	-	Golfingiida	Golfingiidae	-	*Golfingia* sp.	-	-	-	-	X	X	X	X	X
Sipuncula	-	Sipunculidea	-	Golfingiida	Golfingiidae	-	Golfingiidae indet.	-	-	-	-	-	-	Y	X	Y
Sipuncula	-	Sipunculidea	-	Golfingiida	Golfingiidae	-	*Nephasoma* sp.	-	-	-	-	X	-	X	X	-
XXXX	-	-	-	-	-	-	Cyclostomatida indet.	-	-	-	-	-	-	Y	-	-
							# New Unique Taxa each year	135	84	53	50	113	47	41	34	16
							TOTAL # Taxa (COUNT)	135	147	156	188	237	320	318	370	266

APPENDIX 8A-2

Benthic Infauna Lab Data

biologica

Total abundance data in matrix format, including total taxa (species richness) count per sample, total abundance per sample and total density (organsisms/m^2) for Golder Baffinland Iron Mine MEEMP, 2021.

Biologica Sample ID									mb21-042-001	mb21-042-002	mb21-042-003	mb21-042-004	mb21-042-005	mb21-042-006	mb21-042-007	mb21-042-008	mb21-042-009	mb21-042-010	mb21-042-011	mb21-042-012	mb21-042-013	mb21-042-014	mb21-042-015	mb21-042-016	mb21-042-017
Client Sample ID									SE-1	SE-3	SE-5	SE-6	SW-1	SW-2	SW-3	SW-4	SW-5	SNE-1	SNE-2	SNE-3	SNE-4	SNW-1	SNW-2	SNW-3	SNW-4
Date Sampled									14-Aug-21	18-Aug-21	18-Aug-21	16-Aug-21	16-Aug-21	14-Aug-21	10-Aug-21	9-Aug-21	9-Aug-21	18-Aug-21	18-Aug-21	18-Aug-21	16-Aug-21	17-Aug-21	17-Aug-21	10-Aug-21	10-Aug-21
								Grand Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
taxcode	grpcode	Phylum	Class	Order	Family	Subfamily	Taxon Name	Unique Taxa	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance
ARTH	CRTA	Arthropoda	Malacostraca	Tanaidacea	Akanthophoreidae		Akanthophoreus sp.	1	752	16	48	112	224				160	32	16			16	16		16	96
MISC	BRYO	Bryozoa	Gymnolaemata	Ctenostomatida	Alcyonidiidae		Alcyonidium sp.	1	18										1			17				
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae		Ampelisca eschrichtii	1	2	1		1														
ANNE	POSE	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetinae	Ampharete petersenae	1	48	16	16						16									
ANNE	POSE	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetinae	Ampharete sp.		160			112			32	16										
ANNE	POSE	Annelida	Polychaeta	Terebellida	Ampharetidae		Ampharetidae indet.		128						16				32			16			16	48
ANNE	POSE	Annelida	Polychaeta	Terebellida	Ampharetidae		Amphicteis sundevalli	1	2									1					1			
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda			Amphipoda indet.		64									16		16		16				16
ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellinae	Amphitrite cirrata	1	3		1							1	1							
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Uristidae		Anonyx lilljeborgi	1	4					2	2											
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Uristidae		Anonyx sp.		64				16	16	16											16
ANNE	POSE	Annelida	Polychaeta	Terebellida	Cirratulidae		Aphelochaeta sp.	1	352					80			176								96	
ANNE	POSE	Annelida	Polychaeta	Spionida	Apistobranchidae		Apistobranchus sp.	1	16								16									
MOLL	MOGA	Mollusca	Gastropoda	Littorinimorpha	Capulidae		Ariadnaria borealis	1	16				16													
ANNE	POSE	Annelida	Polychaeta		Paraonidae		Aricidea hartmanae	1	528	16				32		32	128		48	48	16		48	80	64	16
ANNE	POSE	Annelida	Polychaeta		Paraonidae		Aricidea minuta	1	752	80	64	80				80	240	160	16				32			
ANNE	POSE	Annelida	Polychaeta		Paraonidae		Aricidea nolani	1	176	16	16	16		16			16	48					16	16		16
ANNE	POSE	Annelida	Polychaeta		Paraonidae		Aricidea sp.		128		16									16	32	16	32	16		
MISC	URAS	Chordata	Ascidiacea	Phlebobranchia	Ascidiidae		Ascidia sp.	1	1									1								
MISC	URAS	Chordata	Ascidiacea				Ascidiacea indet.		32													16				16
MOLL	MOBI	Mollusca	Bivalvia	Carditida	Astartidae		Astarte borealis	1	542	70	117	44	96	36		9	68	51	31				19	1		
MOLL	MOBI	Mollusca	Bivalvia	Carditida	Astartidae		Astarte montagui	1	1,504	171	413	269	185	32		7	118	137	24	37	10	13	68	8	9	3
MOLL	MOBI	Mollusca	Bivalvia	Carditida	Astartidae		Astarte sp.		544	32	80	64	32			16	80	48	112	16	16		32		16	
MOLL	MOBI	Mollusca	Bivalvia	Lucinida	Thyasiridae		Axinopsida sp.	1	16											16						
ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.	1	825	115				582	112					16						
MOLL	MOBI	Mollusca	Bivalvia	Venerida	Arcidae		Bathyarca glacialis	1	28											3	9	10		5	1	
MOLL	MOBI	Mollusca	Bivalvia				Bivalvia indet.		320	16	32	48	48	16		32		32	32		16		48			
MOLL	MOGA	Mollusca	Gastropoda	Littorinimorpha	Rissoidae		Boreocingula castanea	1	64		32	16						16								
MISC	BRAC	Brachiopoda					Brachiopoda indet.	1	1													1				
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Diastylidae		Brachydiastylis resima	1	1,600		16	64	1,216				256					48				
MISC	BRYO	Bryozoa					Bryozoa indet.		2													2				
MOLL	MOGA	Mollusca	Gastropoda	Neogastropoda	Buccinidae		Buccinidae indet.	1	48		16		16					16									
ANNE	POSE	Annelida	Polychaeta	Sabellida	Serpulidae	Spirorbinae	Bushiella sp.	1	3											2		1				
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae		Byblis sp.	1	16															16		
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Bylgides sarsi	1	32										32							
ARTH	CRCO	Arthropoda	Hexanauplia	Calanoida			Calanoida indet.	1	16					16												
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Calloporidae		Callopora sp.	1	1													1				
MISC	BRYO	Bryozoa	Gymnolaemata	Gymnolaemata	Calloporidae		Calloporidae indet.	1	16													16				
MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.	1	16										16							
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Nannastacidae		Campylaspis rubicunda	1	16																	16
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Candidae		Candidae indet.		16											16						
ANNE	POSE	Annelida	Polychaeta		Capitellidae		Capitella capitata complex	1	144					80	48			16								
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Cardiidae		Cardiidae indet.		48				16			16		16								
MOLL	MOAP	Mollusca	Caudofoveata				Caudofoveata indet.		16												16					
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Calloporidae		Cauloramphus sp.	1	4				3									1				
MOLL	MOGA	Mollusca	Gastropoda	Cephalaspidea			Cephalaspidea indet.		16											16						
MISC	NTEA	Nemertea	Palaeonemertea	Archinemertea	Cephalothricidae		Cephalothrix sp.	1	64	32								16								16
MOLL	MOAP	Mollusca	Caudofoveata	Chaetodermatida	Chaetodermatidae		Chaetoderma sp.	1	64												32				16	16
ANNE	POSE	Annelida	Polychaeta	Terebellida	Cirratulidae		Chaetozone bathyala	1	2,000	288	352	160		80		128	512	208	176					16	16	64
ANNE	POSE	Annelida	Polychaeta	Terebellida	Cirratulidae		Chaetozone careyi	1	416						80	336										
ANNE	POSE	Annelida	Polychaeta	Terebellida	Cirratulidae		Chaetozone pigmentata	1	306	32	16		2				160	48							16	32
ANNE	POSE	Annelida	Polychaeta	Terebellida	Cirratulidae		Chaetozone setosa complex	1	64								32	32								
ANNE	POSE	Annelida	Polychaeta	Terebellida	Cirratulidae		Chaetozone sp.		1,552	96	96	48		80	32	288	320	128	80	16		16		48	160	144
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida			Cheilostomatida indet.		34		16									9	2	4		3		
MOLL	MOBI	Mollusca	Bivalvia	Pectinida	Pectinidae	Pedinae	Chlamys islandica	1	1	1																
ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellinae	Chone sp.	1	16				16													
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Cardiidae	Clinocardiinae	Ciliatocardium ciliatum	1	29	1	17	4	2				3	2								
ANNE	POSE	Annelida	Polychaeta	Terebellida	Cirratulidae		Cirratulidae indet.		1,600	16	128	112	80	64	128	160	320		48	16	48		176	80	112	112
ANNE	POSE	Annelida	Polychaeta	Terebellida	Pectinariidae		Cistenides granulata	1	442	81	35	114	48			48	77	39								
ANNE	POSE	Annelida	Polychaeta		Maldanidae	Euclymeninae	Clymenura sp.	1	128			16									32	16			16	48
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Corophiidae		Corophiidae indet.		16							16										
ANNE	POSE	Annelida	Polychaeta		Cossuridae		Cossura longocirrata	1	1,232	48	128	48		16		80	416	176	48	48	16			16	160	32
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Corophiinae	Crassicorophium sp.	1	16		16															
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Cribrilinidae		Cribrilina sp.	1	1													1				
MISC	BRYO	Bryozoa	Stenolaemata	Cyclostomatida	Crisiidae		Crisia sp.	1	16													16				
MOLL	MOGA	Mollusca	Gastropoda	Littorinimorpha	Naticidae	Naticinae	Cryptonatica affinis	1	3		1		1						1							
MOLL	MOBI	Mollusca	Bivalvia	Anomalodesmata	Cuspidariidae		Cuspidaria sp.	1	16											16						
ARTH	CRCO	Arthropoda	Hexanauplia	Cyclopoida			Cyclopoida indet.	1	288					32		16	128	48	16			32		16		
MOLL	MOGA	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae		Cylichna alba	1	16													16				
MOLL	MOGA	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae		Cylichna sp.		48		16						16								16	
MOLL	MOGA	Mollusca	Gastropoda	Cephalaspidea	Cylichnidae		Cylichnidae indet.		304		80		48				32	96			16		16	16		
ARTH	CROS	Arthropoda	Ostracoda	Podocopida	Cytheridae		Cytheridae indet.	1	48			48														
MISC	PORI	Porifera	Demospongiae				Demospongiae indet.	1	2													2				
ARTH	CRIS	Arthropoda	Malacostraca	Isopoda	Desmosomatidae		Desmosomatidae indet.	1	32											16	16					
ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae		Dialychone sp. 1	1	160	16			16				96	32								
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Diastylidae		Diastylidae indet.		32									16	16							
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Diastylidae		Diastylis goodsiri	1	145				80							32	1	16			16	
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Diastylidae		Diastylis lucifera	1	32			32														
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Diastylidae		Diastylis rathkei	1	128				16				16	48	32				16			
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Diastylidae		Diastylis scorpioides	1	160		48	16			16				32				32		16	
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Diastylidae		Diastylis spinulosa	1	16										16							
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Diastylidae		Diastyloides biplicatus	1	304	32	32						16	32	192							
ANNE	POSE	Annelida	Polychaeta	Terebellida	Flabelligeridae		Diplocirrus hirsutus	1	48				16								16			16		
ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Dipolydora quadrilobata	1	112				16		96											
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Dulichiidae		Dulichiidae indet.	1	16								16									
ANNE	ANOL	Annelida	Clitellata	Enchytraeida	Enchytraeidae		Enchytraeidae indet.	1	96		16			32	32				16							
MOLL	MOBI	Mollusca	Bivalvia	Nuculida	Nuculidae		Ennucula tenuis	1	1,218	16	2		32				16	48	16	160	144	64	144	192	160	224

MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Escharellidae		Escharella sp.	1	2															1		1			
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Exochellidae		Escharoides sp.	1	16															16					
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteone longa complex	1	48													16		16				16		
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteone sp.		48			16		16											16					
ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellinae	Euchone incolor	1	864	96	64	64		16		64	416	144												
ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellinae	Euchone sp.		17				1																	16
ANNE	POSE	Annelida	Polychaeta		Maldanidae	Euclymeninae	Euclymeninae indet.		160																	32	32	96		
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Leuconidae		Eudorella emarginata	1	16																	16				
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Leuconidae		Eudorella sp.		80		16		32													32				
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Leuconidae		Eudorella truncatula	1	64			32																32		
MOLL	MOGA	Mollusca	Gastropoda	Littorinimorpha	Naticidae	Polinicinae	Euspira pallida	1	1																					1
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Syllidae	Exogoninae	Exogone naidina	1	208	32		48	64															16	48	
ANNE	POSE	Annelida	Polychaeta	Sabellida	Fabriciidae		Fabriciidae indet.		16															16						
ANNE	POSE	Annelida	Polychaeta	Sabellida	Oweniidae		Galathowenia oculata	1	324											96				33	32	1	81	81		
MOLL	MOGA	Mollusca	Gastropoda				Gastropoda indet.		32		16							16												
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Gattyana cirrhosa	1	19		3	3	2		1		6	3			1									
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Glyceridae		Glycera sp.	1	16																			16		
ARTH	CRIS	Arthropoda	Malacostraca	Isopoda	Gnathiidae		Gnathia sp.	1	80											32				32						16
MISC	SIPN	Sipuncula	Sipunculidea	Golfingiida	Golfingiidae		Golfingia sp.	1	32										16									16		
MISC	SIPN	Sipuncula	Sipunculidea	Golfingiida	Golfingiidae		Golfingiidae indet.		80													16						16	48	
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Dexaminoidae	Prophliantinae	Guernea nordenskioldi	1	3,312	336	576	480	480		32	16	448	752	160				32						
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Ampeliscidae		Haploops tubicola	1	49	16	16								16	1										
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Harmothoe imbricata	1	18	1								17												
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Harmothoe rarispina	1	16									16												
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Harmothoe sp.		128		16	16	16				32		32							16				
ARTH	CRCO	Arthropoda	Hexanauplia	Harpacticoida			Harpacticoida indet.	1	32						32															
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Phoxocephalidae	Harpiniinae	Harpinia serrata	1	48																16	32				
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.		32										32											
MISC	NTEA	Nemertea	Pilidiophora	Heteronemertea			Heteronemertea indet.		32		32																			
MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica	1	662	10	72	50	45	44	102	67	185	61	23		1	1						1	
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Tryphosidae		Hippomedon propinqvus	1	2					2																
MISC	NTEA	Nemertea	Hoplonemertea				Hoplonemertea indet.	1	64	64																				
ANNE	POSE	Annelida	Polychaeta	Terebellida	Cirratulidae		Kirkegaardia sp.	1	32								32													
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Lampropidae		Lamprops fuscatus	1	1,872	160	272	144	208	32	112	96	432	400							16				
ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellinae	Lanassa venusta venusta	1	16			16																		
ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellinae	Laphania boecki	1	16							16														
MOLL	MOBI	Mollusca	Bivalvia	Galeommatida	Lasaeidae		Lasaeidae indet.	1	16															16						
ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellinae	Leaena ebranchiata	1	17				1					16												
ANNE	POSE	Annelida	Polychaeta		Orbiniidae	Orbiniinae	Leitoscoloplos sp.	1	336										64	16	32		32	80	48	64				
MOLL	MOGA	Mollusca	Gastropoda		Lepetidae		Lepeta caeca	1	47										4	24			1	1	1	16				
MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata			Leptothecata indet.		16		16																			
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Leuconidae		Leucon nasica	1	128	128																				
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Leuconidae		Leucon nasicoides	1	1,200		80	48				16	464	368	144				16		32	16	16			
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Leuconidae		Leucon sp.		80		80																			
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Leuconidae		Leuconidae indet.		16																			16		
MISC	NTEA	Nemertea	Pilidiophora	Heteronemertea	Lineidae		Lineidae indet.	1	144	32				16	16	16		32									16	16		
ANNE	POER	Annelida	Polychaeta	Eunicida	Lumbrineridae		Lumbrineridae indet.		48									16			32									
ANNE	POER	Annelida	Polychaeta	Eunicida	Lumbrineridae		Lumbrineris fauchaldi	1	128	112						16														
MOLL	MOBI	Mollusca	Bivalvia	Anomalodesmata	Lyonsiidae		Lyonsia arenosa	1	1				1																	
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Lysianassidae		Lysianassidae indet.		32	32																				
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Lysianassoidea		Lysianassoidea indet.		272		48	16	16	16	32	32		112												
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Tellinidae	Macominae	Macoma calcarea	1	273	1	20		38	18		5	7	22	19	29	13	10	7	58	13	13				
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Tellinidae	Macominae	Macoma moesta	1	71	1	8	19	6	2		3	8	8		1	4	2	2	2	2	3				
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Tellinidae	Macominae	Macoma sp.		32		32																			
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Tellinidae	Macominae	Macominae indet.		435	16		48	16					80	64	113		1		16	49	32				
ANNE	POSE	Annelida	Polychaeta		Maldanidae	Maldaninae	Maldane sarsi	1	1,243		208		82			65	274	96	16	48	48	97		49	99	161				
ANNE	POSE	Annelida	Polychaeta		Maldanidae		Maldanidae indet.		48								16				32									
MOLL	MOGA	Mollusca	Gastropoda	Neogastropoda	Mangeliidae		Mangeliidae indet.	1	16														16							
ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Marenzelleria sp.	1	64						48	16														
MOLL	MOGA	Mollusca	Gastropoda	Trochida	Margaritidae		Margarites groenlandicus	1	3	1			1						1											
ANNE	POSE	Annelida	Polychaeta		Capitellidae		Mediomastus sp.	1	880	16	64	80	16	32	48	160	192	128	48		16	16			48	16				
ANNE	POSE	Annelida	Polychaeta	Terebellida	Ampharetidae	Melinninae	Melinna elisabethae	1	133												18	32	17	2	16	48				
ANNE	POSE	Annelida	Polychaeta		Maldanidae	Euclymeninae	Microclymene sp.	1	32	16														16						
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Nephtyidae		Micronephthys cornuta	1	1,553	128	97	48	48			16	176	224	112	32	48	48	160	144	240	32				
MISC	CNHY	Cnidaria	Hydrozoa	Limnomedusae	Monobrachiidae		Monobrachium parasitum	1	73	1			2			1	21	2	17	6	4	2	2	5	4	6				
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae		Monoculodes sp.	1	240	16			16		32		80	64	16					16						
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae		Monoculopsis longicornis	1	96							96														
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae		Monoculopsis sp.		48					16			16						16							
MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus discors	1	1	1																				
MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Musculus sp.		32									32												
MOLL	MOBI	Mollusca	Bivalvia	Myida	Myidae		Mya sp.		97		32					16	1	16	16				16							
MOLL	MOBI	Mollusca	Bivalvia	Myida	Myidae		Mya truncata	1	183	4	57	41	22	3	5	7	10	7	25				2							
ANNE	POSE	Annelida	Polychaeta	Sabellida	Oweniidae		Myriochele heeri	1	19															1		18				
ANNE	POSE	Annelida	Polychaeta	Sabellida	Oweniidae		Myriochele sp.		144											16		64	32	32						
ECHI	ECHO	Echinodermata	Holothuroidea	Apodida	Myriotrochidae		Myriotrochus rinkii	1	17																	17				
MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.		16													16							
ANNE	ANOL	Annelida	Clitellata	Haplotaxida	Naididae		Naididae indet.	1	48		32				16															
MOLL	MOGA	Mollusca	Gastropoda	Littorinimorpha	Naticidae		Naticidae indet.		16								16													
MISC	NTEA	Nemertea					Nemertea indet.		32									32												
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Nephtyidae		Nephtys ciliata	1	5					1			1						1	2						
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Nephtyidae		Nephtys sp.		16												16									
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides	1	736	96	240	32	16	16	32		112	32	160											
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereidinae	Nereis zonata	1	134	1	36	1	4				26	65	1											
ANNE	POER	Annelida	Polychaeta	Eunicida	Onuphidae	Onuphinae	Nothria conchylega	1	194											4	5	33		4	37	111				
ANNE	POSE	Annelida	Polychaeta		Capitellidae		Notomastus sp.	1	83						16							35			32					
MOLL	MOBI	Mollusca	Bivalvia	Nuculanida	Nuculanidae	Nuculaninae	Nuculana minuta	1	293	32	129	48	32				50	2												
MOLL	MOBI	Mollusca	Bivalvia	Nuculanida	Nuculanidae	Nuculaninae	Nuculana pernula	1	53		1							2		16	1		17			16				
MOLL	MOBI	Mollusca	Bivalvia	Nuculanida	Nuculanidae		Nuculana sp.		432	32	48	64					48	80	32	48	16		32		16	16				
MOLL	MOBI	Mollusca	Bivalvia	Nuculanida			Nuculanoidea indet.		112								16	16		32		16		32						
ARTH	CHPY	Arthropoda	Pycnogonida	Pantopoda	Nymphonidae		Nymphon sp.	1	2													1			1					
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae		Oedicerotidae indet.		96	16			32										48							
ANNE	POSE	Annelida	Polychaeta		Opheliidae		Ophelia sp.	1	16						16															
ANNE	POSE	Annelida	Polychaeta		Opheliidae	Opheliinae	Ophelina sp.	1	48	16		16																		16
ECHI	ECOP	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	Ophiocten affinis	1	19	1														7	6	5				
ECHI	ECOP	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	Ophiura robusta	1	36	2	2							6	2	18			1	5						
ECHI	ECOP	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	Ophiura sarsii	1	30		1			1			5	2		3	10	1		2	5					
ECHI	ECOP	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	Ophiura sp.		28									16		2	4	3		2	1					
ECHI	ECOP	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	Ophiuridae indet.		80		16											48			16					

ECHI	ECOP	Echinodermata	Ophiuroidea				Ophiuroidea indet.		96										16		32	32			16		
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Opisidae		Opisa sp.	1	16										16								
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Tryphosidae		Orchomene sp.	1	16									16									
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Tryphosidae		Orchomenella minuta	1	32								32										
ANNE	POSE	Annelida	Polychaeta	Sabellida	Oweniidae		Owenia fusiformis	1	117				18						16	32	48	1	1				1
ANNE	POSE	Annelida	Polychaeta	Sabellida	Oweniidae		Oweniidae indet.		48												32				16		
ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae		Paramphitrite birulai	1	16	16																	
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae		Paroediceros lynceus	1	32					16											16		
MOLL	MOGA	Mollusca	Gastropoda				Patellogastropoda indet.	1	16													16					
MOLL	MOBI	Mollusca	Bivalvia	Pectinida			Pectinoidea indet.		48										16		32						
MOLL	MOBI	Mollusca	Bivalvia		Periplomatidae		Periploma aleuticum	1	6		1	1						1	1	1				1			
ARTH	CROS	Arthropoda	Ostracoda	Myodocopida	Philomedidae		Philomedes sp.	1	8,048	528	704	784	160		16	48	1,040	1,584	192	432	240	96	320	720	848	336	
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe longa	1	2,659	289	112	192	64	16	129	304	976	497	64				16				
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	1	8,908	1,660	1,488	976	256	32	16	64	2,352	992	448	32		64	64		224	240	
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe sp.		2,944	16	144	176	144				96	624	544	128	192	320	176	176	160	48	
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocinae	Phyllodoce groenlandica	1	16						16												
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocinae	Phyllodoce sp.		16					16													
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae		Phyllodocidae indet.		32						32												
ANNE	POSE	Annelida	Polychaeta	Sabellida	Serpulidae	Spirorbinae	Pileolaria sp.	1	1											1							
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Syllidae	Eusyllinae	Pionosyllis sp.	1	48								48										
ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellinae	Pista maculata	1	81	21	9	6	6				16	19	4								
ARTH	CRIS	Arthropoda	Malacostraca	Isopoda	Paramunnidae		Pleurogonium spinosissimum	1	32														32				
MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Styelidae		Polycarpa sp.	1	4		1		1					2										
ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae	Polycirrinae	Polycirrus sp. complex	1	176	16							16	80		16					16	32	
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.		128	16					16	32		16						32	16		
ANNE	POSE	Annelida	Polychaeta		Scalibregmatidae		Polyphysia baffinensis	1	1								1										
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Pontogeneiidae		Pontoporeia femorata	1	64	16	16	32															
ANNE	POSE	Annelida	Polychaeta		Maldanidae	Euclymeninae	Praxillella gracilis	1	16																16		
MISC	PRIA	Cephalorhyncha	Priapulida				Priapulida indet.		64		16	16					16			16							
MISC	PRIA	Cephalorhyncha	Priapulida	Priapulomorpha	Priapulidae		Priapulus sp.	1	1										1								
ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Prionospio sp.	1	352								16		16						240	80	
MOLL	MOBI	Mollusca	Bivalvia	Pectinida	Propeamussiidae		Propeamussiidae indet.		1								1										
ANNE	POSE	Annelida	Polychaeta	Sabellida	Fabriciidae		Pseudofabricia sp. nr. aberrans	1	32																32		
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Smittinidae		Pseudoflustra sp.	1	1													1					
ARTH	CRTA	Arthropoda	Malacostraca	Tanaidacea	Sphyrapodidae	Pseudosphyrapodinae	Pseudosphyrapus anomalus	1	640										240				272	128			
ARTH	CRTA	Arthropoda	Malacostraca	Tanaidacea	Pseudotanaidae		Pseudotanais sp.	1	224	16		48	16				64				32	16		32			
ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Pygospio elegans	1	208	80	32					48	48										
MOLL	MOGA	Mollusca	Gastropoda	Littorinimorpha	Rissoidae		Rissoidae indet.		48	16		32															
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae		Rostroculodes longirostris	1	32									32									
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae		Rostroculodes sp.		224	16	32	16	32			32	16	48				16	16				
ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae		Sabellidae indet.		176			96	16							16	16		16		16		
ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae		Sabellidae sp. 3	1	32						16												16
ARTH	CRDE	Arthropoda	Malacostraca	Decapoda	Crangonidae		Sabinea septemcarinata	1	1															1			
ARTH	CRDE	Arthropoda	Malacostraca	Decapoda	Crangonidae		Sabinea sp.		1									1									
ANNE	POSE	Annelida	Polychaeta		Scalibregmatidae		Scalibregma inflatum	1	1,329	208	48	96				16	401	416	96	16	16			16			
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Bitectiporidae		Schizomavella sp.	1	1																1		
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida			Schizoporelloidea indet.		2															1	1		
ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Scolelepis sp.	1	144					32	96	16											
ANNE	POER	Annelida	Polychaeta	Eunicida	Lumbrineridae		Scoletoma fragilis	1	720	16		16			16		32	16	16		96		64	112	256	80	
ANNE	POER	Annelida	Polychaeta	Eunicida	Lumbrineridae		Scoletoma impatiens	1	768		128	256		16			224	128	16								
ANNE	POER	Annelida	Polychaeta	Eunicida	Lumbrineridae		Scoletoma sp.		720	96	16		16			48				48		288	32	32	112	32	
ANNE	POSE	Annelida	Polychaeta		Orbiniidae	Orbiniinae	Scoloplos armiger	1	144						32	32	32	48									
ANNE	POSE	Annelida	Polychaeta		Orbiniidae	Orbiniinae	Scoloplos sp.		240	32	16	32	48			32	16	48	16								
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Cardiidae	Clinocardiinae	Serripes groenlandicus	1	87	7	2	6	21		48		3										
MOLL	MOBI	Mollusca	Bivalvia	Pectinida	Propeamussiidae		Similipecten greenlandicus	1	327	1	1			5	4		16	3	6	100			62	65		64	
MOLL	MOSC	Mollusca	Scaphopoda	Gadilida	Gadilidae		Siphonodentalium lobatum	1	32											16						16	
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Smittinidae		Smittina sp.	1	1													1					
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Sphaerodoridae		Sphaerodoropsis biserialis	1	48												16	16					16
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Sphaerodoridae		Sphaerodoropsis minuta	1	32											16			16				
ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spio filicornis	1	64	16	16	16						16									
ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spio sp.		400	16					256	112		16									
ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		288		16		16	144	64	32		16									
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Stenothoidae	Stenothoinae	Stenothoidae indet.	1	32				32														
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Fatkullinidae		Stomacrustula pachystega	1	1											1							
ECHI	ECEC	Echinodermata	Echinoidea	Camarodonta	Strongylocentrotidae		Strongylocentrotus droebachiensis	1	8	3	1	1	1				1	1									
ECHI	ECEC	Echinodermata	Echinoidea	Camarodonta	Strongylocentrotidae		Strongylocentrotus sp.		1										1								
ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae		Terebellidae indet.		32											16					16		
ANNE	POSE	Annelida	Polychaeta	Terebellida	Trichobranchidae	Trichobranchinae	Terebellides sp.	1	629	48	39	67	66				102	275			16			16			
MOLL	MOBI	Mollusca	Bivalvia	Anomalodesmata	Thraciidae		Thracia myopsis	1	3											2			1				
MOLL	MOBI	Mollusca	Bivalvia	Anomalodesmata	Thraciidae		Thracia sp.		16												16						
MOLL	MOBI	Mollusca	Bivalvia	Lucinida	Thyasiridae		Thyasira sp.	1	448		80					64	64	48	32		32	32	48	48			
MOLL	MOBI	Mollusca	Bivalvia	Lucinida	Thyasiridae		Thyasiridae indet.		336	16	32			32		16	16	48	80	16		16	32			32	
MOLL	MOPO	Mollusca	Polyplacophora	Chitonida	Tonicellidae	Tonicellinae	Tonicella marmorea	1	2	1			1														
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Candidae		Tricellaria sp.	1	1											1							
MISC	BRYO	Bryozoa	Stenolaemata	Cyclostomatida	Tubuliporidae		Tubulipora sp.	1	17											1		16					
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae		Westwoodilla sp.	1	112		80						32										
MOLL	MOBI	Mollusca	Bivalvia	Nuculanida	Yoldiidae		Yoldiella frigida	1	128											16	32				16	64	
MOLL	MOBI	Mollusca	Bivalvia	Nuculanida	Yoldiidae		Yoldiella intermedia	1	64											16						48	
MOLL	MOBI	Mollusca	Bivalvia	Nuculanida	Yoldiidae		Yoldiella sp.		64											16						48	
MOLL	MOBI	Mollusca	Bivalvia	Nuculanida	Yoldiidae		Yoldiidae indet.		16													16					
							Total Abundance		**72,441**	**5,790**	**7,226**	**5,619**	**4,352**	**1,654**	**1,987**	**2,918**	**12,217**	**9,436**	**3,906**	**2,008**	**1,619**	**1,940**	**2,346**	**2,563**	**3,847**	**3,013**	
							Total Unique Taxa (Species Richness)	**190**																			
							Grab Sampler		**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	**Van veen**	
							# of Composite Grabs		**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	
							Total Density (Organisms/m^2)		**241,470**	**19,300**	**24,087**	**18,730**	**14,507**	**5,513**	**6,623**	**9,727**	**40,723**	**31,453**	**13,020**	**6,693**	**5,397**	**6,467**	**7,820**	**8,543**	**12,823**	**10,043**	
Fish:																											
MISC	PIXX	Chordata	Actinopterygii (Pisces)				Pisces indet.	1	16													16					
Incidental Taxa:																											
MEMO	MEMO	Annelida	Polychaeta	Sabellida	Oweniidae		Owenia sp. (fragment)		16															16			
MEMO	MEMO	Arthropoda	Hexanauplia				Copepoda indet. (parasitic)		35	3	16		16														
MEMO	MEMO	Arthropoda	Malacostraca	Decapoda	Crangonidae		Crangonidae indet. (fragment)		1								1										
MEMO	MEMO	Arthropoda	Ostracoda				Ostracoda indet. (planktonic)		9,632	752	960	688	624	352	80		2,176	1,664	464	160	224	176	512	80	192	528	
MEMO	MEMO	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet. (planktonic)		16					16													
MEMO	MEMO	Nematoda					Nematoda indet.		19,152	1,504	1,136	2,928	1,200	336	176	352	2,688	1,760	416	448	1,264	736	528	464	2,448	768	
MEMO	MEMO	Nemertea					Nemertea indet. (fragment)		1				1														
MEMO	MEMO						Egg/egg mass		352		48	80					48	16			16			144			

APPENDIX 8A-3

Laboratory Methods

Marine Benthic Enumeration and Identification Methods
Client: Golder
Project: Baffinland Iron Mine MEEMP, 2021
Protocol: EEM

Sample Inventory

Sample arrival: 15-Sept-21
Number of samples: 17
Number of jars: 34
Screen size: 500 µm and 1.0 cm
Biologica project number: 21-042

The chain of custody documents were checked and approved with the client. Samples were transferred from formalin into 70% ethanol and stained with Rose Bengal to aid in sorting. Each sample was provided a unique identification number and placed in the queue for analysis.

Table 1. Summary of benthic samples processed for Golder Baffinland Iron Mine MEEMP, 2021

Client Sample ID	Date Sampled	Biologica Sample ID	# of Jars	Field Screen	Field Split	Final Split	Organisms Counted
SE-1	14-Aug-21	mb21-042-001	1	500 µm	1/4	1/16	343
			2	1.0 cm	Whole	Whole	302
SE-3	18-Aug-21	mb21-042-002	1	500 µm	1/4	1/16	441
			2	1.0 cm	Whole	Whole	170
SE-5	18-Aug-21	mb21-042-003	1	500 µm	1/4	1/16	339
			1	1.0 cm	Whole	Whole	195
SE-6	16-Aug-21	mb21-042-004	1	500 µm	1/4	1/16	260
			2	1.0 cm	Whole	Whole	192
SW-1	16-Aug-21	mb21-042-005	2	500 µm	1/4	1/16	92
			2	1.0 cm	Whole	Whole	182
SW-2	14-Aug-21	mb21-042-006	1	500 µm	1/4	1/16	122
			1	1.0 cm	Whole	Whole	35
SW-3	10-Aug-21	mb21-042-007	1	500 µm	1/4	1/16	178
			1	1.0 cm	Whole	Whole	70
SW-4	9-Aug-21	mb21-042-008	1	500 µm	1/4	1/16	745
			2	1.0 cm	Whole	Whole	297
SW-5	9-Aug-21	mb21-042-009	1	500 µm	1/4	1/16	577
			2	1.0 cm	Whole	Whole	204
SNE-1	18-Aug-21	mb21-042-010	2	500 µm	1/4	1/16	240
			2	1.0 cm	Whole	Whole	66
SNE-2	18-Aug-21	mb21-042-011	1	500 µm	1/4	1/16	120
			2	1.0 cm	Whole	Whole	88
SNE-3	18-Aug-21	mb21-042-012	1	500 µm	1/4	1/16	97
			2	1.0 cm	Whole	Whole	67

Client Sample ID	Date Sampled	Biologica Sample ID	# of Jars	Field Screen	Field Split	Final Split	Organisms Counted
SNE-4	16-Aug-21	mb21-042-013	1	500 µm	1/4	1/16	117
			2	1.0 cm	Whole	Whole	84
SNW-1	17-Aug-21	mb21-042-014	1	500 µm	1/4	1/16	143
			1	1.0 cm	Whole	Whole	58
SNW-2	17-Aug-21	mb21-042-015	1	500 µm	1/4	1/16	156
			1	1.0 cm	Whole	Whole	67
SNW-3	10-Aug-21	mb21-042-016	2	500 µm	1/4	1/16	237
			2	1.0 cm	Whole	Whole	55
SNW-4	10-Aug-21	mb21-042-017	2	500 µm	1/4	1/16	185
			1	1.0 cm	Whole	Whole	53

Sample Processing

Sorting and Subsampling:

All samples were sorted using dissecting microscopes at 10–40x magnification by trained personnel. Microscopic sorting is the only way to ensure >90% of organisms are removed from the debris, which is required by EEM (Environment Canada; Environmental Effects Monitoring) guidelines for marine benthic analyses. To minimize potential sorter bias, samples were distributed among technicians such that no one person sorted all the replicates of a given sample.

Due to historically the large volumes and high abundances in the samples, samples were fractioned in the field into a 1.0 cm macro fraction and 500 µm fine fraction. This strategy was developed to maximize the detection of large and rare individuals in the macro fraction while accurately enumerating smaller organisms in the fine fraction. The macro 1.0 cm fraction was analyzed whole, with all large organisms (>1.0 cm) removed from the sample, as was done in 2020. The abundances of these large organisms should be comparable to historical estimates (SEM Ltd., 2016; Biologica, 2017–2019). In addition, all large debris in this fraction were checked microscopically, including rocks and other large debris to ensure encrusting organisms were accurately enumerated.

Biologica subsampled the fine 500 µm fraction. The 500 µm fraction was split in the field to 1/4. Biologica subsequently split this fraction by a second 1/4, for a final 1/16 split. Subsampling was done with a Caton tray (Caton, 1991). The sample was spread evenly over a Caton grid, and sequential random quadrats were selected and sorted until the minimum 1/4 split was reached.

Sorting QA/QC:

To ensure sorting efficiency was >95%, whole and/or partial sub-samples were re-sorted. Sorting efficiency was calculated using the following equation (where total count = final total number of organisms in sample):

Sorting efficiency = [1−(# of organisms in spotcheck or re-sort / total organisms)] x 100
*Total organisms includes the original count and the number found from the re-sort

Sorting efficiency QA/QC was performed on 18% of samples. 25–100% of the debris was re-sorted for the selected samples. All samples checked must meet or exceed 95% sorting efficiency. Any samples falling below 95% sorting efficiency were re-sorted in their entirety, and additional checks were undertaken as necessary. For quality assurance, QA re-sorts were performed on 10% of samples. Two samples were randomly selected and re-sorted in their entirety. Refer to Table 2 for sorting efficiency results.

Table 2. Summary of sorting QA/QC results for Golder Baffinland Iron Mine MEEMP, 2021.

Client Sample ID	Biologica Sample ID	Sorting Efficiency QA Whole Re-sorts
SE-1	mb21-042-001	
SE-3	mb21-042-002	
SE-5	mb21-042-003	
SE-6	mb21-042-004	
SW-1	mb21-042-005	
SW-2	mb21-042-006	
SW-3	mb21-042-007	
SW-4	mb21-042-008	
SW-5	mb21-042-009	
SNE-1	mb21-042-010	
SNE-2	mb21-042-011	
SNE-3	mb21-042-012	98.23%
SNE-4	mb21-042-013	
SNW-1	mb21-042-014	
SNW-2	mb21-042-015	98.81%
SNW-3	mb21-042-016	
SNW-4	mb21-042-017	
Average:		**98.52%**

Identification and Invasive Species Detection:

All organisms were identified using a combination of dissecting (10–40x) and compound microscopes (100–1000x) and standard taxonomic keys (see methodological and taxonomic references) to the lowest practicable level (species whenever possible). All specimens were archived in air-tight glass vials with glycerin and 70% ethanol for long-term storage. Taxonomic data were recorded in Biologica's custom database.

During the identification process, taxonomists recorded if any identified taxa were beyond their recorded range and/or potentially introduced (originating from another location) or invasive (both introduced and appearing to proliferate with possible detrimental effects to the ecosystem and/or industry). One genus of interest, *Marenzelleria,* is currently under review and awaiting verification by DNA analysis. Taxa previously identified as *Marenzelleria sp.* (identified as *M. viridis* by an unnamed taxonomist from the laboratory of Phillipe Archembault, Laval University) from 2019 and 2020 were sent for external verification to Vasily Radashevsky from the National Scientific Center of Marine Biology. Dr. Radashevsky hypothesized that there are 2 possible species present, *M. neglecta* and *M. wireni*. Until these identifications are confirmed the specimens have been left at the confirmed genus level. No other taxa observed were identified as putative invasive taxa.

Data Management and Analysis

All data were recorded in Biologica's custom database. Total abundances were extrapolated for samples split in the field to represent the abundance from the whole sample. Organism densities were calculated by dividing the total organism abundance (extrapolated if the sample was split) using the area of a Van Veen grab (0.1 m^2), with three composite Van Veen grabs (3 x 0.1m^2) for each sample.

Results were provided to the Golder project manager in Excel spreadsheets via email.

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APPENDIX 8B-1

Incidental Taxa Identifications

Appendix 8B-1

Incidental Taxa Identifications

Phylum Class/Order	Family	Taxa	Method
Acanthocephala			
-/-	-	Acanthocephala indet.	Stomach Contents
Annelida			
Polychaeta/-	-	Polychaeta indet.	Stomach Contents, Freight Dock Offset Monitoring
Polychaeta/Sabellida	Oweniidae	*Owenia* sp.	Incidentals
Polychaeta/Terebellida	Pectinariidae	*Cistenides granulata*	Freight Dock Offset Monitoring
Arthropoda			
-/-	-	Crustacea indet.	Stomach Contents
Hexanauplia/-	-	Copepoda indet.	Incidentals
Hexanauplia/Calanoida	-	Calanoida indet.	Stomach Contents
Hexanauplia/Calanoida	Calanidae	*Calanus glacialis*	Stomach Contents
Hexanauplia/Calanoida	Calanidae	*Calanus* sp.	Stomach Contents
Hexanauplia/Harpacticoida	-	Harpacticoida indet.	Stomach Contents
Insecta/-	-	Insecta indet.	Stomach Contents
Insecta/Diptera	Chironomidae	***Hydrobaenus* sp.**	Stomach Contents
Insecta/Diptera	Simuliidae	**Simuliidae indet.**	Stomach Contents
Insecta/Diptera	Tipulidae	**Tipulidae indet.**	Stomach Contents
Insecta/Ephemeroptera	-	**Ephemeroptera indet.**	Stomach Contents
Malacostraca/Amphipoda	-	Amphipoda indet.	Stomach Contents
Malacostraca/Amphipoda	-	Hyperiidea indet.	Stomach Contents
Malacostraca/Amphipoda	Atylidae	Atylus carinatus	Stomach Contents
Malacostraca/Amphipoda	Atylidae	*Atylus* sp.	Stomach Contents
Malacostraca/Amphipoda	Eusiridae	*Rhachotropis aculeata*	Incidentals
Malacostraca/Amphipoda	Gammaridae	Gammaridae indet.	Stomach Contents
Malacostraca/Amphipoda	Gammaridae	*Gammarus sp.*	Stomach Contents
Malacostraca/Amphipoda	Hyperiidae	*Themisto libellula*	Stomach Contents
Malacostraca/Amphipoda	Hyperiidae	*Themisto sp.*	Stomach Contents
Malacostraca/Amphipoda	Oedcerotidae	Monoporeia affinis	Stomach Contents
Malacostraca/Amphipoda	Uristidae	*Anonyx sp.*	Stomach Contents
Malacostraca/Amphipoda	Uristidae	*Onisimus sp.*	Stomach Contents
Malacostraca/Decapoda	Crangonidae	Crangonidae indet.	Incidentals
Malacostraca/Mysida	Mysidae	*Mysis* sp.	Stomach Contents
Malacostraca/Mysida	-	Mysida indet.	Stomach Contents, Freight Dock Offset Monitoring
Pycnogonida/-	-	Pycnogonida indet.	Freight Dock Offset Monitoring
Ostracoda/-	-	Ostracoda indet.	Incidentals
Thecostraca/-	-	Cirripedia indet.	Stomach Contents
Thecostraca/Balanomorpha	-	Balanomorpha indet.	Incidentals, Stomach Contents, Freight Dock Offset Monitoring
Brachiopoda			
-/-	-	**Brachiopoda indet.**	Freight Dock Offset Monitoring
Bryozoa			
-/-	-	Bryozoa indet.	Freight Dock Offset Monitoring
Chlorophyta			
-/-	-	Chlorophyta indet.	Freight Dock Offset Monitoring
Ulvophyceae/Ulotrichales	Ulotrichaceae	***Urospora neglecta***	Algae Collections, Freight Dock Offset Monitoring
Ulvophyceae/Cladophorales	Cladophoraceae	***Chaetomorpha melagonium***	Algae Collections
Chordata			
-/-	-	Tunicata indet.	Freight Dock Offset Monitoring
Ascidiacea/-	-	Ascidiacea indet.	Stomach Contents
Ascidiacea/Phlebobranchia	Ascidiidae	*Ascidia* sp.	Incidentals
Ascidiacea/Stolidobranchia	Pyuridae	*Boltenia echinata*	Incidentals
Ascidiacea/Stolidobranchia	Styelidae	*Polycarpa* sp.	Incidentals
-/-	-	Pisces indet.	Stomach Contents, Incidentals
Actinopterygii/Gadiformes	Gadidae	Gadidae indet.	Fishing Efforts
Actinopterygii/Gadiformes	Gadidae	*Gadus ogac*	Fishing Efforts
Actinopterygii/Perciformes	Agonidae	***Aspidophoroides olrikii***	Fishing Efforts
Actinopterygii/Perciformes	Agonidae	***Leptagonus decagonus***	Fishing Efforts
Actinopterygii/Perciformes	Cottidae	Cottidae indet.	Fishing Efforts, Freight Dock Offset Monitoring
Actinopterygii/Perciformes	Cottidae	*Gymnocanthus tricuspis*	Fishing Efforts
Actinopterygii/Perciformes	Cottidae	*Myoxocephalus quadricornis*	Fishing Efforts
Actinopterygii/Perciformes	Cottidae	Myoxocephalus scorpioides	Fishing Efforts
Actinopterygii/Perciformes	Cottidae	*Myoxocephalus scorpius*	Fishing Efforts, Freight Dock Offset Monitoring
Actinopterygii/Perciformes	Cottidae	*Myoxocephalus* sp.	Fishing Efforts, Stomach Contents
Actinopterygii/Perciformes	Cottidae	***Triglops pingelii***	Fishing Efforts
Actinopterygii/Perciformes	Cyclopteridae	***Eumicrotremus spinosus***	Freight Dock Offset Monitoring
Actinopterygii/Perciformes	Liparidae	*Liparis* sp.	Fishing Efforts
Actinopterygii/Perciformes	Liparidae	*Liparidae indet.*	Fishing Efforts
Actinopterygii/Perciformes	Salmonidae	*Salvelinus alpinus*	Fishing Efforts
Actinopterygii/Perciformes	Zoarcidae	*Lycodes mucosus*	Fishing Efforts
Cnidaria			
Anthozoa/Actiniaria	-	Actiniaria indet.	Freight Dock Offset Monitoring
Ctenophora			
Tentaculata/Cydippida	Mertensiidae	*Mertensia ovum*	Freight Dock Offset Monitoring

Appendix 8B-1

Incidental Taxa Identifications

Echinodermata			
Echinoidea/Camarodonta	Strongylocentrotidae	*Strongylocentrotus droebachiens.*	Incidentals, Freight Dock Offset Monitoring
Holothuroidea/Dendrochirotida	Psolidae	Psolidae indet.	Freight Dock Offset Monitoring
Ophiuroidea/Ophiurida	Ophiuridae	Ophiuridae indet.	Freight Dock Offset Monitoring
Mollusca			
Bivalvia/-	-	Bivalvia indet.	Stomach Contents
Bivalvia/Adapedonta	Hiatellidae	*Hiatella arctica*	Freight Dock Offset Monitoring
Bivalvia/Myida	Myidae	*Mya truncata*	Freight Dock Offset Monitoring
Bivalvia/Mytilida	-	Mytilida indet.	Freight Dock Offset Monitoring
Bivalvia/Pectinida	Pectinidae	*Chlamys islandica*	Freight Dock Offset Monitoring
Gastropoda/-	Lottiidae	Lottiidae indet.	Freight Dock Offset Monitoring
Gastropoda/Pteropoda	Limacinidae	*Limacina* sp.	Stomach Contents
Polyplacophora/Chitonida	Tonicellidae	*Tonicella* sp.	Freight Dock Offset Monitoring
Nematoda			
-/-	-	Nematoda indet.	Incidentals
Nemertea			
-/-	-	Nemertea indet.	Incidentals
Ochrophyta			
Phaeophyceae/-	-	Phaeophyceae indet.	Freight Dock Offset Monitoring
Phaeophyceae/Desmarestiales	Desmarestiaceae	***Desmarestia aculeata***	Algae Collections
Phaeophyceae/Desmarestiales	Desmarestiaceae	***Desmarestia viridis****	Algae Collections
Phaeophyceae/Ectocarpales	Acinetosporaceae	*Pylaiella* sp.	Freight Dock Offset Monitoring
Phaeophyceae/Ectocarpales	Acinetosporaceae	***Pylaiella* cf. *varia***	Algae Collections
Phaeophyceae/Ectocarpales	Chordariaceae	**cf. *Coelocladia arctica***	Algae Collections
Phaeophyceae/Ectocarpales	Chordariaceae	***Dictyosiphon foeniculaceus****	Algae Collections
Phaeophyceae/Ectocarpales	Scytosiphonaceae	**cf. *Petalonia***	Algae Collections
Phaeophyceae/Fucales	Fucaceae	*Fucus distichus*	Freight Dock Offset Monitoring/Algae Collections
Phaeophyceae/Laminariales	Agaraceae	*Agarum clathratum*	Freight Dock Offset Monitoring
Phaeophyceae/Laminariales	Laminariaceae	*Saccharina latissima*	Freight Dock Offset Monitoring
Phaeophyceae/Sphacelariales	Sphacelariaceae	*Battersia* sp.	Freight Dock Offset Monitoring
Phaeophyceae/Tilopteridales	Halosiphonaceae	*Halosiphon tomentosus**	Freight Dock Offset Monitoring/Algae Collections
Rhodophyta			
-/-	-	Rhodophyta indet.	Freight Dock Offset Monitoring
Florideophyceae/Ceramiales	Rhodomelaceae	***Rhodomela virgata***	Algae Collections
Florideophyceae/Ceramiales	Rhodomelaceae	***Savoiea arctica***	Algae Collections
Florideophyceae/Corallinales	-	Corallinales indet.	Freight Dock Offset Monitoring
Florideophyceae/Gigartinales	Dumontiaceae	***Dilsea socialis***	Algae Collections
Florideophyceae/Gigartinales	Phyllophoraceae	***Coccotylus truncatus***	Algae Collections
Florideophyceae/Palmariales	Palmariaceae	*Palmaria palmata*	Freight Dock Offset Monitoring

*In algae collections, additional samples were identified as cf. *Desmarestia viridis* cf. *Dictyosiphon foeniculaceus* and cf. *Halosiphon tomentosus*

Notes: taxa identified to the lowest practical taxonomic level; indet.= indeterminate (taxa which could not be identified beyond the taxonomic level listed); sp.=species; cf.=compare with (taxa is an inexact match to the designated taxa).

Taxa in bold indicate new observations in MEEMP and NIS/AIS programs

All taxa cross-referenced with NIS/AIS resources: Fofonoff et al. 2022, ISSG 2022, Rius et al. 2022, Molnar et al. 2008, Casas-Monroy et al. 2014

APPENDIX 8B-2

Quadrat Samples

biologica

Raw abundance data in long format for Golder Baffinlands, 2021 Quadrat Taxonomy.

Client	Project	Year	Sample Type	Split	Biologica Sample ID	Client Sample ID	Date Sampled	taxcode	grpcode	Phylum	Class	Order	Family	Subfamily	Taxon Name	A	Int	J	Total Abundance	Unique Taxa Count	Comments
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-036	Q3	15-Aug-21	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-036	Q3	15-Aug-21	ECHI	ECOP	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	Ophiura robusta	3			3	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-036	Q3	15-Aug-21	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Pyuridae		Boltenia echinata	1			1	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-037	Q4	6-Aug-21	ANNE	ANHI	Annelida	Clitellata				Hirudinea indet.	2			2	1	1.0 cm. Attached to shrimp, Sclerocrangon boreas
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-037	Q4	6-Aug-21	ARTH	CRDE	Arthropoda	Malacostraca	Decapoda	Crangonidae		Sclerocrangon boreas	1			1	1	Leech attached to leg. Possibly eggs from another organism attached to abdominal appendages, eggs are not from Sclerocrangon
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-037	Q4	6-Aug-21	MOLL	MOGA	Mollusca	Gastropoda	Neogastropoda	Buccinidae		Buccinum hydrophanum	1			1	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-038	Q11	14-Aug-21	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-038	Q11	14-Aug-21	ALGAE	ALGAE	Rhodophyta	Florideophyceae	Gigartinales	Phyllophoraceae		Coccotylus truncatus				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-038	Q11	14-Aug-21	ECHI	ECOP	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	Ophiura sarsii	1			1	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-038	Q11	14-Aug-21	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Styelidae		Polycarpa sp.	1			1	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Cladophorales	Cladophoraceae		Rhizoclonium cf. riparium				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Dictyosiphon ekmanii				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides	1	3		4	1	1.0 cm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	Incidental	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	3			3	1	Small ~5.0 mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellinae	Euchone sp.	2			2	1	~2.0 cm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	ANNE	POSE	Annelida	Polychaeta		Capitellidae		Mediomastus sp.	1			1	1	1.0 cm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	Encrusting	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.			3	3	1	Small <5mm. Attached to bivalve
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	Encrusting	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.			29	29		Small <5mm. Attached to Mytilus
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	Incidental	CRIS	Arthropoda	Malacostraca	Isopoda	Gnathiidae		Gnathia sp.		1		1	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	Incidental	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			1	1		Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	Incidental	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			13	13	1	Small <5mm. Possibly Nereimyra
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	Incidental	POSE	Annelida	Polychaeta	Spionida	Spionidae		Pygospio elegans	4			4	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	MISC	NTEA	Nemertea	Pilidiophora	Heteronemertea	Lineidae		Lineidae indet.		1		1	1	1.0 cm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilus edulis complex	1			1	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-039	Q13	15-Aug-21	MOLL	MOGA	Mollusca	Gastropoda		Lottiidae		Testudinalia testudinalis		1		1	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		cf. Spongomorpha aeruginosa				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Sphacelariales			Sphacelariales indet.				Present	1	Possibly Battersia cf. arctica, Protohalopteris radicans, or Sphaceloderma caespitulum
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	Incidental	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides	1			1	1	Small ~8.0 mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	Incidental	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	1			1	1	Small ~4.5 mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellinae	Euchone sp.	2			2	1	~2.5-5.0 cm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	Incidental	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Musculus sp.			1	1	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	Incidental	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			10	10		Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	Incidental	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			16	16	1	Small <5mm. Possibly Nereimyra
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	Incidental	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteoninae indet.			1	1	1	Small <5mm. Possibly Eteone
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	Incidental	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Harmothoe imbricata	1			1	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	Incidental	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			1	1		Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-040	Q14	16-Aug-21	Incidental	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.			1	1	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-041	Q16	8-Aug-21	ALGAE	ALGAE	Rhodophyta	Florideophyceae	Ceramiales	Delesseriaceae	Phycodryoideae	Phycodrys fimbriata				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-041	Q16	8-Aug-21	Encrusting	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Eucrateidae		Eucratea sp.	1			1	1	Encrusting small colony
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-041	Q16	8-Aug-21	Incidental	MOBI	Mollusca	Bivalvia				Bivalvia indet.			5	5		Small <5mm, probably Mytilidae
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-041	Q16	8-Aug-21	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus discors	1			1	1	Shell opened and appeared to have died prior to preservation
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-041	Q16	8-Aug-21	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Crenella faba		2		2	1	Shell opened and appeared to have died prior to preservation
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-041	Q16	8-Aug-21	MOLL	MOGA	Mollusca	Gastropoda	Trochida	Margaritidae		Margarites groenlandicus	1			1	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-042	Q1	14-Aug-21	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-042	Q1	14-Aug-21	Incidental	CHAR	Arthropoda	Arachnida				Acari indet.	1			1	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-042	Q1	14-Aug-21	Incidental	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			1	1	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-042	Q1	14-Aug-21	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Styelidae		Polycarpa sp.	2			2	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-042	Q1	14-Aug-21	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus discors	1			1	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae		Desmarestia viridis				Present	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Sphacelariales			Sphacelariales indet.				Present	1	Possibly Battersia cf. arctica, Protohalopteris radicans, or Sphaceloderma caespitulum
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae	Terebellinae	Pista maculata	1			1	1	~6.0 cm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	ECHI	ECOP	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	Ophiura sp.	1			1	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	Encrusting	CRCI	Arthropoda	Thecostraca	Balanomorpha	Balanidae	Balaninae	Balanus sp.	1			1	1	1.0 cm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	Incidental	CRAM	Arthropoda	Malacostraca	Amphipoda	Stenothoidae	Stenothoinae	Stenothoidae indet.	1			1	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	Incidental	MOBI	Mollusca	Bivalvia	Myida	Myidae		Mya sp.			1	1	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	Incidental	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			1	1	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	Incidental	MOBI	Mollusca	Bivalvia				Bivalvia indet.			1	1		Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	Incidental	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides		1		1	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	Incidental	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe sp.	1	4		5	1	Small <5mm
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	MOLL	MOBI	Mollusca	Bivalvia	Carditida	Astartidae		Astarte borealis	2			2	1	One shell opened and appeared to have died prior to preservation
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus discors		1		1	1	Shell opened and appeared to have died prior to preservation
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-043	Q20	8-Aug-21	MOLL	MOGA	Mollusca	Gastropoda	Trochida	Margaritidae		Margarites helicinus	1			1	1	
Golder	Baffinlands	2021	Quadrat Taxonomy	Whole	mb21-042-044	AN3D	18-Aug-21	Encrusting	BRYO	Bryozoa	Gymnolaemata	Ctenostomatida	Alcyonidiidae		Alcyonidium sp.	1			1	1	Encrusting large colony

APPENDIX 8B-3

Trawl Specimens

biologica

Raw abundance data in long format for Golder Baffinlands, 2021 Trawl Samples.

Client	Project	Year	Sample Type	Split	Biologica Sample ID	Client Sample ID	Sample Description	Date Sampled	taxcode	grpcode	Phylum	Class	Order	Family	Subfamily	Taxon Name	A	Int	J	Total Abundance	Unique Taxa Count	Comments
Golder	Baffinlands	2021	Trawl	Whole	mb21-042-078	TR02	Snailfish sp. 1	19-Aug-21	MISC	PIXX	Chordata	Actinopterygii (Pisces)	Scorpaeniformes	Liparidae		Liparis sp.		1		1	1	Possibly L. tunicatus or L. gibbus, pectoral ray count is unclear
Golder	Baffinlands	2021	Trawl	Whole	mb21-042-079	TR04	UNPO	19-Aug-21	MISC	PIXX	Chordata	Actinopterygii (Pisces)	Perciformes	Cottidae		Triglops pingelii		2		2	1	
Golder	Baffinlands	2021	Trawl	Whole	mb21-042-080	TR04	UNPO 2	19-Aug-21	MISC	PIXX	Chordata	Actinopterygii (Pisces)	Perciformes	Agonidae	Anoplagoninae	Aspidophoroides olrikii	2			2	1	
Golder	Baffinlands	2021	Trawl	Whole	mb21-042-081	TR04	Amphipod sp.	19-Aug-21	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Eusiridae		Rhachotropis aculeata	1			1	1	
Golder	Baffinlands	2021	Trawl	Whole	mb21-042-082	TR02	Urchin sp.	19-Aug-21	ECHI	ECEC	Echinodermata	Echinoidea	Camarodonta	Strongylocentrotidae		Strongylocentrotus droebachiensis	1			1	1	
Golder	Baffinlands	2021	Trawl	Whole	mb21-042-083	TR02	Poacher sp.	19-Aug-21	MISC	PIXX	Chordata	Actinopterygii (Pisces)	Perciformes	Agonidae	Agoninae	Leptagonus decagonus			1	1	1	
Golder	Baffinlands	2021	Trawl	Whole	mb21-042-084	TR04	UNSC	19-Aug-21	MISC	PIXX	Chordata	Actinopterygii (Pisces)	Perciformes	Cottidae		Myoxocephalus sp.		1		1	1	Possibly M. aenaeus; small ~6 cm
Golder	Baffinlands	2021	Trawl	Whole	mb21-042-085	TR04	Tunicate spp.	19-Aug-21	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Pyuridae		Boltenia echinata	1			1	1	
Golder	Baffinlands	2021	Trawl	Whole	mb21-042-085	TR04	Tunicate spp.	19-Aug-21	MISC	URAS	Chordata	Ascidiacea	Phlebobranchia	Ascidiidae		Ascidia sp.	2	1		3	1	
Golder	Baffinlands	2021	Trawl	Whole	mb21-042-085	TR04	Tunicate spp.	19-Aug-21	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Styelidae		Polycarpa sp.	1			1	1	

APPENDIX 8B-4

Fish Stomach Lab Data

biologica

Abundance and biomass data for fish stomach contents for Golder Baffinland Iron Mine MEEMP, 2021.

Client	Project	Year	Sample Type	Fish	Biologica Sample ID	Client Sample ID	Date Sampled	% Fullness	%Material Digested	Full Stomach Weight (g)	Source	Group Code	Phylum	Subphylum	Class	Subclass	Order	Family	Taxon	Stage	Total Abundance	Total WW (g)	WW/ Individual (g)	Total Unique Taxa	Comments	Processing Note
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-086	BAFF21UMLNFHSC1001	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-087	BAFF21UMLNFHSC1002	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-088	BAFF21UMLNFHSC1003	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-089	BAFF21UMLNFHSC1004	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-090	BAFF21UMLNFHSC1005	8-Aug-21	0	0	5.05803	n/a	n/a							Empty Stomach	n/a	n/a	n/a				
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-091	BAFF21UMLNFHSC1006	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-092	BAFF21UMLNFHSC1007	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-093	BAFF21UMLNFHSC1008	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-094	BAFF21UMLNFHSC1009	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-095	BAFF21UMLNFHSC1010	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-096	BAFF21UMLNFHSC1011	8-Aug-21	100	75	5.66762	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammaridae indet.	Int/parts	6	0.04082	0.00680	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-096	BAFF21UMLNFHSC1011	8-Aug-21	100	75	5.66762	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	Onisimus sp.	A	3	0.08576	0.02859	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-096	BAFF21UMLNFHSC1011	8-Aug-21	100	75	5.66762	Undetermined	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Amphipoda indet.	Parts		0.14070	0.14070			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-096	BAFF21UMLNFHSC1011	8-Aug-21	100	75	5.66762	Undetermined	CRXX	Arthropoda	Crustacea					Crustacea indet.	Parts		0.06614	0.06614			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-096	BAFF21UMLNFHSC1011	8-Aug-21	100	75	5.66762	Non-food	Non-food							Sand	n/a	n/a	n/a				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-096	BAFF21UMLNFHSC1011	8-Aug-21	100	75	5.66762	Undetermined	XXXX							Unidentified tissue	Parts		2.38459	2.38459			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-097	BAFF21UMLNFHSC1012	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-098	BAFF21UMLNFHSC1013	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-099	BAFF21UMLNFHSC1014	8-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-100	BAFF21UMLNFHSC1015	8-Aug-21	5	0	16.00525	Planktonic	MOGA	Mollusca		Gastropoda	Heterobranchia	Pteropoda	Limacinidae	Limacina sp.	A	1	0.00798	0.00798	1		
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-100	BAFF21UMLNFHSC1015	8-Aug-21	5	0	16.00525	Non-food	Non-food							Sand	n/a	n/a	n/a				
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-101	BAFF21UMLNFHSC1016	9-Aug-21	25	75	5.41915	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammaridae indet.	Int/parts	1	0.01073	0.01073	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-101	BAFF21UMLNFHSC1016	9-Aug-21	25	75	5.41915	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	Monoporeia affinis	A/parts	1	0.01126	0.01126	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-101	BAFF21UMLNFHSC1016	9-Aug-21	25	75	5.41915	Epibenthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	Anonyx sp.	A/parts	1	0.09163	0.09163	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-101	BAFF21UMLNFHSC1016	9-Aug-21	25	75	5.41915	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	Onisimus sp.	A/parts	5	0.03867	0.00773	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-101	BAFF21UMLNFHSC1016	9-Aug-21	25	75	5.41915	Undetermined	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Amphipoda indet.	Parts		0.01647	0.01647			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-101	BAFF21UMLNFHSC1016	9-Aug-21	25	75	5.41915	Planktonic	CRCI	Arthropoda	Crustacea	Thecostraca	Cirripedia	Balanomorpha		Balanomorpha indet.	Cypris	1	0.00001	0.00001	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-101	BAFF21UMLNFHSC1016	9-Aug-21	25	75	5.41915	Planktonic	MOGA	Mollusca		Gastropoda	Heterobranchia	Pteropoda	Limacinidae	Limacina sp.	Parts		0.02997	0.02997	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-101	BAFF21UMLNFHSC1016	9-Aug-21	25	75	5.41915	Non-food	Non-food							Sand	n/a	n/a	n/a				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-101	BAFF21UMLNFHSC1016	9-Aug-21	25	75	5.41915	Undetermined	XXXX							Unidentified tissue	Parts		0.67493	0.67493			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-102	BAFF21UMLNFHSC1017	9-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-103	BAFF21UMLNFHSC1018	9-Aug-21	75	100	5.39398	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammaridae indet.	A/parts	2	0.01594	0.00797	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-103	BAFF21UMLNFHSC1018	9-Aug-21	75	100	5.39398	Planktonic	CRCI	Arthropoda	Crustacea	Thecostraca	Cirripedia	Balanomorpha		Balanomorpha indet.	Cypris	15	0.00026	0.00002	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-103	BAFF21UMLNFHSC1018	9-Aug-21	75	100	5.39398	Non-food	Non-food							Plant material	n/a	n/a	n/a				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-103	BAFF21UMLNFHSC1018	9-Aug-21	75	100	5.39398	Non-food	Non-food							Sand	n/a	n/a	n/a				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-103	BAFF21UMLNFHSC1018	9-Aug-21	75	100	5.39398	Undetermined	PIXX	Chordata	Vertebrata					Pisces indet.	Parts		1.12408	1.12408	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-103	BAFF21UMLNFHSC1018	9-Aug-21	75	100	5.39398	Undetermined	XXXX							Unidentified tissue	Parts		0.47076	0.47076			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-104	BAFF21UMLNFHSC1019	9-Aug-21	50	75	12.73151	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammaridae indet.	A/parts	4	0.07482	0.01871	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-104	BAFF21UMLNFHSC1019	9-Aug-21	50	75	12.73151	Non-food	Non-food							Sand	n/a	n/a	n/a				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-104	BAFF21UMLNFHSC1019	9-Aug-21	50	75	12.73151	Undetermined	XXXX							Unidentified tissue	Parts		0.68245	0.68245			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-105	BAFF21UMLNFHSC1020	9-Aug-21	100	100	5.17669	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammaridae indet.	Parts		0.30492	0.30492	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-105	BAFF21UMLNFHSC1020	9-Aug-21	100	100	5.17669	Undetermined	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Amphipoda indet.	Parts		2.51457	2.51457		Likely Gammaridae indet.	Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-105	BAFF21UMLNFHSC1020	9-Aug-21	100	100	5.17669	Benthic	MOBI	Mollusca		Bivalvia				Bivalvia indet.	Parts		0.02327	0.02327	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-105	BAFF21UMLNFHSC1020	9-Aug-21	100	100	5.17669	Non-food	Non-food							Sand	n/a	n/a	n/a				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-105	BAFF21UMLNFHSC1020	9-Aug-21	100	100	5.17669	Undetermined	XXXX							Unidentified tissue	Parts		0.05302	0.05302			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-106	BAFF21UMLNFHSC1021	9-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-107	BAFF21UMLNFHSC1022	9-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-108	BAFF21UMLNFHSC1023	9-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-109	BAFF21UMLNFHSC1024	9-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-110	BAFF21UMLNFHSC1025	9-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-111	BAFF21UMLNFHSC1026	9-Aug-21	75	100	6.12311	Undetermined	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Amphipoda indet.	Parts		0.02419	0.02419	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-111	BAFF21UMLNFHSC1026	9-Aug-21	75	100	6.12311	Planktonic	CRCI	Arthropoda	Crustacea	Thecostraca	Cirripedia			Cirripedia indet.	Cypris	7	0.00069	0.00010	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-111	BAFF21UMLNFHSC1026	9-Aug-21	75	100	6.12311	Planktonic	CRMY	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida		Mysida indet.	Parts		0.01977	0.01977	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-111	BAFF21UMLNFHSC1026	9-Aug-21	75	100	6.12311	Undetermined	CRXX	Arthropoda	Crustacea					Crustacea indet.	Parts		0.01564	0.01564			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-111	BAFF21UMLNFHSC1026	9-Aug-21	75	100	6.12311	Benthic	INDI	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Tipulidae	Tipulidae indet.	L/parts	3	5.98426	1.99475	1	Freshwater	Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-111	BAFF21UMLNFHSC1026	9-Aug-21	75	100	6.12311	Non-food	Non-food							Plant material	n/a	n/a	n/a				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-111	BAFF21UMLNFHSC1026	9-Aug-21	75	100	6.12311	Non-food	Non-food							Sand	n/a	n/a	n/a				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-111	BAFF21UMLNFHSC1026	9-Aug-21	75	100	6.12311	Undetermined	XXXX							Unidentified tissue	Parts		2.26001	2.26001			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-112	BAFF21UMLNFHSC1027	9-Aug-21	10	75	3.42921	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus sp.	Int	1	0.00181	0.00181	1		Organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-112	BAFF21UMLNFHSC1027	9-Aug-21	10	75	3.42921	Undetermined	XXXX							Unidentified tissue	Parts		0.11773	0.11773			Organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-113	BAFF21UMLNFHSC1028	9-Aug-21	10	100	3.70381	Undetermined	XXXX							Unidentified tissue	Parts		0.12687	0.12687	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-114	BAFF21UMLNFHSC1029	9-Aug-21	100	50	7.56655	Undetermined	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Amphipoda indet.	Parts		0.00311	0.00311	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-114	BAFF21UMLNFHSC1029	9-Aug-21	100	50	7.56655	Planktonic	CRCI	Arthropoda	Crustacea	Thecostraca	Cirripedia	Balanomorpha		Balanomorpha indet.	Cypris	11	0.00102	0.00009	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-114	BAFF21UMLNFHSC1029	9-Aug-21	100	50	7.56655	Planktonic	CRCO	Arthropoda	Crustacea	Hexanauplii	Copepoda	Calanoida	Calanidae	Calanus sp.	A/parts	105	0.13062	0.00124	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-114	BAFF21UMLNFHSC1029	9-Aug-21	100	50	7.56655	Non-food	Non-food							Plant material	n/a	n/a	n/a				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-114	BAFF21UMLNFHSC1029	9-Aug-21	100	50	7.56655	Non-food	Non-food							Sand	n/a	n/a	n/a				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-114	BAFF21UMLNFHSC1029	9-Aug-21	100	50	7.56655	Planktonic	PIXX	Chordata	Vertebrata					Pisces indet.	Int/parts	1	2.70125	2.70125	1	Possibly Ammodytes sp.	Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-114	BAFF21UMLNFHSC1029	9-Aug-21	100	50	7.56655	Undetermined	XXXX							Unidentified tissue	Parts		0.84541	0.84541			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-115	BAFF21UMLNFHSC1030	10-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-116	BAFF21UMLNFHSC1031	10-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-117	BAFF21UMLNFHSC1032	10-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-118	BAFF21UMLNFHSC1033	10-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-119	BAFF21UMLNFHSC1034	10-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-120	BAFF21UMLNFHSC1035	10-Aug-21	25	50	2.25778	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus sp.	A/parts	1	0.00834	0.00834	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-120	BAFF21UMLNFHSC1035	10-Aug-21	25	50	2.25778	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	Monoporeia affinis	A/parts	1	0.01127	0.01127	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-120	BAFF21UMLNFHSC1035	10-Aug-21	25	50	2.25778	Planktonic	CRCI	Arthropoda	Crustacea	Thecostraca	Cirripedia	Balanomorpha		Balanomorpha indet.	Cypris	11	0.00060	0.00005	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-120	BAFF21UMLNFHSC1035	10-Aug-21	25	50	2.25778	Undetermined	XXXX							Unidentified tissue	Parts		0.16073	0.16073			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-121	BAFF21UMLNFHSC1036	10-Aug-21	100	75	6.62087	Undetermined	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Amphipoda indet.	Parts		0.02768	0.02768	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-121	BAFF21UMLNFHSC1036	10-Aug-21	100	75	6.62087	Planktonic	CRCI	Arthropoda	Crustacea	Thecostraca	Cirripedia	Balanomorpha		Balanomorpha indet.	Cypris	7	0.00026	0.00004	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-121	BAFF21UMLNFHSC1036	10-Aug-21	100	75	6.62087	Non-food	Non-food							Sand	n/a	n/a	n/a				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-121	BAFF21UMLNFHSC1036	10-Aug-21	100	75	6.62087	Planktonic	PIXX	Chordata	Vertebrata					Pisces indet.	Parts	1	2.43161	2.43161	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-121	BAFF21UMLNFHSC1036	10-Aug-21	100	75	6.62087	Undetermined	XXXX							Unidentified tissue	Parts		0.23069	0.23069			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-122	BAFF21UMLNFHSC1037	10-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-123	BAFF21UMLNFHSC1038	10-Aug-21	50	25	3.12137	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus sp.	A	1	0.79340	0.79340	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-123	BAFF21UMLNFHSC1038	10-Aug-21	50	25	3.12137	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Oedicerotidae	Monoporeia affinis	A	1	0.00462	0.00462	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-123	BAFF21UMLNFHSC1038	10-Aug-21	50	25	3.12137	Epibenthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	Anonyx sp.	A	1	0.25409	0.25409	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-123	BAFF21UMLNFHSC1038	10-Aug-21	50	25	3.12137	Planktonic	CRMY	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Mysis sp.	Int/parts	2	0.05091	0.02546	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-123	BAFF21UMLNFHSC1038	10-Aug-21	50	25	3.12137	Benthic	URAS	Chordata	Tunicata	Ascidiacea				Ascidiacea indet.	A	1	0.09702	0.09702	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-123	BAFF21UMLNFHSC1038	10-Aug-21	50	25	3.12137	Undetermined	XXXX							Unidentified tissue	Parts		0.15991	0.15991			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-124	BAFF21UMLNFHSC1039	10-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a			Archived_Not Processed	
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-125	BAFF21UMLNFHSC1040	10-Aug-21	5	75	1.87063	Planktonic	CRCI	Arthropoda	Crustacea	Thecostraca	Cirripedia	Balanomorpha		Balanomorpha indet.	Cypris	5	0.00018	0.00004	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-125	BAFF21UMLNFHSC1040	10-Aug-21	5	75	1.87063	Epibenthic	CRCO	Arthropoda	Crustacea	Hexanauplii	Copepoda	Harpacticoida		Harpacticoida indet.	A/parts	1	0.00002	0.00002	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-125	BAFF21UMLNFHSC1040	10-Aug-21	5	75	1.87063	Undetermined	CRXX	Arthropoda	Crustacea					Crustacea indet.	Parts		0.00059	0.00059	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-125	BAFF21UMLNFHSC1040	10-Aug-21	5	75	1.87063	Undetermined	XXXX							Unidentified tissue	Parts		0.02260	0.02260			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-126	BAFF21UMLNGN03ARCH03	6-Aug-21	25	100	26.24445	Undetermined	PIXX	Chordata	Vertebrata					Pisces indet.	Parts		1.58043	1.58043	1	Whirl pack label matched COC (BAFF21UMLNGN03ARCH03). Bottle labeled as GN03ARCH04.	Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-126	BAFF21UMLNGN03ARCH03	6-Aug-21	25	100	26.24445	Undetermined	XXXX							Unidentified tissue	Parts		1.57317	1.57317		Whirl pack label matched COC (BAFF21UMLNGN03ARCH03). Bottle labeled as GN03ARCH04.	Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-127	BAFF21UMLNGN03ARCH04	6-Aug-21	75	75	13.15805	Planktonic	CRCO	Arthropoda	Crustacea	Hexanauplii	Copepoda	Calanoida	Calanidae	Calanus sp.	A	2	0.00744	0.00372	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-127	BAFF21UMLNGN03ARCH04	6-Aug-21	75	75	13.15805	Planktonic	CRMY	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Mysis sp.	A	1	0.03057	0.03057	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-127	BAFF21UMLNGN03ARCH04	6-Aug-21	75	75	13.15805	Planktonic	PIXX	Chordata	Vertebrata					Pisces indet.	A/parts	1	1.39892	1.39892	1	Possibly Ammodytes sp.	Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-127	BAFF21UMLNGN03ARCH04	6-Aug-21	75	75	13.15805	Planktonic	PIXX	Chordata	Vertebrata					Pisces indet.	Int/parts	3	3.17285	1.05762		Possibly Ammodytes sp.	Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-127	BAFF21UMLNGN03ARCH04	6-Aug-21	75	75	13.15805	Planktonic	PIXX	Chordata	Vertebrata					Pisces indet.	Parts		4.76096	4.76096		Possibly Ammodytes sp.	Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-128	BAFF21UMLNGN04ARCH46	6-Aug-21	75	25	11.53445	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Hyperiidae	Themisto libellula	A/parts	7	0.26383	0.03769	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-128	BAFF21UMLNGN04ARCH46	6-Aug-21	75	25	11.53445	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	Onisimus sp.	A/parts	48	1.44605	0.03013	1		Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-128	BAFF21UMLNGN04ARCH46	6-Aug-21	75	25	11.53445	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Hyperiidea indet.	A/parts	1	0.02735	0.02735		Possibly Themisto sp.	Some organisms found outside stomach.

Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-128	BAFF21UMLNGN04ARCH46	6-Aug-21	75	25	11.53445	Planktonic	CRCO	Arthropoda	Crustacea	Hexanauplii	Copepoda	Calanoida	Calanidae	Calanus sp.	A/parts	8	0.03562	0.00445	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-128	BAFF21UMLNGN04ARCH46	6-Aug-21	75	25	11.53445	Planktonic	MOGA	Mollusca		Gastropoda	Heterobranchia	Pteropoda	Limacinidae	Limacina sp.	A/parts	1	0.00185	0.00185	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-128	BAFF21UMLNGN04ARCH46	6-Aug-21	75	25	11.53445	Planktonic	PIXX	Chordata	Vertebrata					Pisces indet.	Int/parts	1	0.44372	0.44372	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-128	BAFF21UMLNGN04ARCH46	6-Aug-21	75	25	11.53445	Undetermined	XXXX							Unidentified tissue	Parts		1.08253	1.08253				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-129	BAFF21UMLNGN05ARCH03	7-Aug-21	25	25	18.40492	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Atylidae	Atylus carinatus	A	1	0.09370	0.09370	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-129	BAFF21UMLNGN05ARCH03	7-Aug-21	25	25	18.40492	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Atylidae	Atylus carinatus	Int/parts	1	0.00878	0.00878				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-129	BAFF21UMLNGN05ARCH03	7-Aug-21	25	25	18.40492	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus sp.	A/parts	5	0.07372	0.01474	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-129	BAFF21UMLNGN05ARCH03	7-Aug-21	25	25	18.40492	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Hyperiidae	Themisto sp.	A/parts	1	0.03055	0.03055	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-129	BAFF21UMLNGN05ARCH03	7-Aug-21	25	25	18.40492	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Hyperiidea indet.	A/parts	1	0.02851	0.02851				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-129	BAFF21UMLNGN05ARCH03	7-Aug-21	25	25	18.40492	Planktonic	CRCO	Arthropoda	Crustacea	Hexanauplii	Copepoda	Calanoida		Calanoida indet.	A/parts	2	0.00213	0.00107	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-129	BAFF21UMLNGN05ARCH03	7-Aug-21	25	25	18.40492	Planktonic	PIXX	Chordata	Vertebrata					Pisces indet.	Int/parts	1	0.65231	0.65231	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-129	BAFF21UMLNGN05ARCH03	7-Aug-21	25	25	18.40492	Undetermined	XXXX							Unidentified tissue	Parts		0.03339	0.03339				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-130	BAFF21UMLNGN05ARCH04	7-Aug-21	25	100	7.16478	Planktonic	CRCO	Arthropoda	Crustacea	Hexanauplii	Copepoda	Calanoida		Calanoida indet.	A/parts	2	0.01396	0.00698	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-130	BAFF21UMLNGN05ARCH04	7-Aug-21	25	100	7.16478	Undetermined	PIXX	Chordata	Vertebrata					Pisces indet.	Parts		0.64832	0.64832	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-130	BAFF21UMLNGN05ARCH04	7-Aug-21	25	100	7.16478	Undetermined	XXXX							Unidentified tissue	Parts		0.08545	0.08545				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-131	BAFF21UMLNGN05ARCH05	7-Aug-21	75	50	13.64315	Parasite	ACAN	Acanthocephala						Acanthocephala indet.	A	4	0.00872	0.00218	1			Cycsts in stomach external lining. Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-131	BAFF21UMLNGN05ARCH05	7-Aug-21	75	50	13.64315	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus sp.	Int	1	0.00095	0.00095	1			Cycsts in stomach external lining. Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-131	BAFF21UMLNGN05ARCH05	7-Aug-21	75	50	13.64315	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Hyperiidae	Themisto libellula	A	2	0.04537	0.02269	1			Cycsts in stomach external lining. Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-131	BAFF21UMLNGN05ARCH05	7-Aug-21	75	50	13.64315	Planktonic	CRMY	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida	Mysidae	Mysis sp.	A	1	0.10505	0.10505	1			Cycsts in stomach external lining. Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-131	BAFF21UMLNGN05ARCH05	7-Aug-21	75	50	13.64315	Epibenthic	PIXX	Chordata	Vertebrata	Actinopteri	Teleostei	Perciformes	Cottidae	Cottidae indet.	Int	1	2.12219	2.12219	1	Possibly Myoxocepalus sp.		Cycsts in stomach external lining. Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-131	BAFF21UMLNGN05ARCH05	7-Aug-21	75	50	13.64315	Planktonic	PIXX	Chordata	Vertebrata					Pisces indet.	Int/parts	2	1.76647	0.88324				Cycsts in stomach external lining. Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-132	BAFF21UMLNGN06ARCH09	7-Aug-21	75	100	0.27957	Benthic	INDI	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Chironomidae	Hydrobaenus sp.	L/parts	25	0.00524	0.00021	1	Freshwater		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-132	BAFF21UMLNGN06ARCH09	7-Aug-21	75	100	0.27957	Benthic	INDI	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Simuliidae	Simuliidae indet.	L/parts	1	0.00119	0.00119	1	Freshwater		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-132	BAFF21UMLNGN06ARCH09	7-Aug-21	75	100	0.27957	Benthic	INDI	Arthropoda	Hexapoda	Insecta	Pterygota	Diptera	Tipulidae	Tipulidae indet.	L/parts	1	0.01069	0.01069	1	Freshwater		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-132	BAFF21UMLNGN06ARCH09	7-Aug-21	75	100	0.27957	Benthic	INEP	Arthropoda	Hexapoda	Insecta	Pterygota	Ephemeroptera		Ephemeroptera indet.	N/parts	4	0.00013	0.00003	1	Freshwater		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-132	BAFF21UMLNGN06ARCH09	7-Aug-21	75	100	0.27957	Benthic	INXX	Arthropoda	Hexapoda	Insecta				Insecta indet.	Parts		0.01641	0.01641		Freshwater		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-132	BAFF21UMLNGN06ARCH09	7-Aug-21	75	100	0.27957	Undetermined	XXXX							Unidentified tissue	Parts		0.02225	0.02225				
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-133	BAFF21UMLNGN08ARCH03	9-Aug-21	5	100	2.94489	Planktonic	MOGA	Mollusca		Gastropoda	Heterobranchia	Pteropoda	Limacinidae	Limacina sp.	Parts		0.02234	0.02234	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-133	BAFF21UMLNGN08ARCH03	9-Aug-21	5	100	2.94489	Undetermined	XXXX							Unidentified tissue	Parts		0.07583	0.07583				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-134	BAFF21UMLNGN09ARCH03	10-Aug-21	75	100	22.73025	Planktonic	PIXX	Chordata	Vertebrata					Pisces indet.	Int/parts	1	8.71524	8.71524	1	Possibly Clupea sp.		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-135	BAFF21UMLNGN10ARCH10	11-Aug-21	50	75	7.24553	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Hyperiidae	Themisto libellula	A/parts	4	0.26524	0.06631	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-135	BAFF21UMLNGN10ARCH10	11-Aug-21	50	75	7.24553	Planktonic	CRCO	Arthropoda	Crustacea	Hexanauplii	Copepoda	Calanoida	Calanidae	Calanus sp.	A/parts	1	0.00109	0.00109	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-135	BAFF21UMLNGN10ARCH10	11-Aug-21	50	75	7.24553	Undetermined	CRXX	Arthropoda	Crustacea					Crustacea indet.	Parts		0.73561	0.73561				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-135	BAFF21UMLNGN10ARCH10	11-Aug-21	50	75	7.24553	Benthic	NTEA	Nemertea						Nemertea indet.	Parts	1	0.03543	0.03543	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-136	BAFF21UREFFHSC1101	15-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a		Archived_Not Processed		
Golder	Baffinlands	2021	Fish Stomach	Fourhorn Sculpin	ms21-042-137	BAFF21UREFFHSC1102	15-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a		Archived_Not Processed		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-138	BAFF21UREFGN12ARCH07	15-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a		Archived_Not Processed		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-139	BAFF21UREFGN12ARCH20	15-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a		Archived_Not Processed		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-140	BAFF21UREFGN12ARCH21	15-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a		Archived_Not Processed		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-141	BAFF21UREFGN12ARCH22	15-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a		Archived_Not Processed		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-142	BAFF21UREFGN15ARCH19	15-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a		Archived_Not Processed		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-143	BAFF21UREFGN15ARCH20	15-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a		Archived_Not Processed		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-144	BAFF21UREFGN15ARCH21	15-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a		Archived_Not Processed		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-145	BAFF21UREFGN15ARCH22	15-Aug-21	n/a	n/a	n/a	n/a								Not Analyzed	n/a	n/a	n/a		Archived_Not Processed		
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-146	BAFF21UMLNGN20ARCH02	17-Aug-21	75	50	10.28625	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Hyperiidae	Themisto libellula	A/parts	19	1.90348	0.10018	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-146	BAFF21UMLNGN20ARCH02	17-Aug-21	75	50	10.28625	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Hyperiidea indet.	Parts		0.02412	0.02412				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-146	BAFF21UMLNGN20ARCH02	17-Aug-21	75	50	10.28625	Planktonic	CRCO	Arthropoda	Crustacea	Hexanauplii	Copepoda	Calanoida	Calanidae	Calanus sp.	A/parts	2	0.01055	0.00528	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-146	BAFF21UMLNGN20ARCH02	17-Aug-21	75	50	10.28625	Planktonic	CRMY	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida		Mysida indet.	Int/parts	2	0.01266	0.00633	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-146	BAFF21UMLNGN20ARCH02	17-Aug-21	75	50	10.28625	Undetermined	CRXX	Arthropoda	Crustacea					Crustacea indet.	Parts		0.45475	0.45475				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-146	BAFF21UMLNGN20ARCH02	17-Aug-21	75	50	10.28625	Undetermined	XXXX							Unidentified tissue	Parts		0.01013	0.01013				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-147	BAFF21UMLNGN21ARCH04	17-Aug-21	25	75	4.66835	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Atylidae	Atylus sp.	J	1	0.00187	0.00187	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-147	BAFF21UMLNGN21ARCH04	17-Aug-21	25	75	4.66835	Planktonic	CRCO	Arthropoda	Crustacea	Hexanauplii	Copepoda	Calanoida		Calanoida indet.	A/parts	10	0.00009	0.00001	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-147	BAFF21UMLNGN21ARCH04	17-Aug-21	25	75	4.66835	Epibenthic	PIXX	Chordata	Vertebrata	Actinopteri	Teleostei	Perciformes	Cottidae	Cottidae indet.	J/parts	3	0.19984	0.06661	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-147	BAFF21UMLNGN21ARCH04	17-Aug-21	25	75	4.66835	Undetermined	POXX	Annelida		Polychaeta				Polychaeta indet.	Parts		0.00290	0.00290	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-147	BAFF21UMLNGN21ARCH04	17-Aug-21	25	75	4.66835	Undetermined	XXXX							Unidentified tissue	Parts		0.00427	0.00427				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-148	BAFF21UMLNGN23ARCH01	18-Aug-21	100	50	39.03136	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Hyperiidae	Themisto libellula	A/parts	148	8.45439	0.05712	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-148	BAFF21UMLNGN23ARCH01	18-Aug-21	100	50	39.03136	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	Onisimus sp.	A	4	0.09974	0.02494	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-148	BAFF21UMLNGN23ARCH01	18-Aug-21	100	50	39.03136	Undetermined	CRXX	Arthropoda	Crustacea					Crustacea indet.	Parts		5.81122	5.81122				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-148	BAFF21UMLNGN23ARCH01	18-Aug-21	100	50	39.03136	Undetermined	PIXX	Chordata	Vertebrata					Pisces indet.	Parts		0.26373	0.26373	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-148	BAFF21UMLNGN23ARCH01	18-Aug-21	100	50	39.03136	Undetermined	XXXX							Unidentified tissue	Parts		0.37478	0.37478				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-149	BAFF21UMLNGN25ARCH03	18-Aug-21	75	50	6.47409	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Hyperiidae	Themisto libellula	A/parts	46	1.98169	0.04308	1			
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-149	BAFF21UMLNGN25ARCH03	18-Aug-21	75	50	6.47409	Undetermined	CRXX	Arthropoda	Crustacea					Crustacea indet.	Parts		1.32605	1.32605				
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-150	BAFF21UMLNGN25ARCH04	18-Aug-21	75	50	5.37191	Planktonic	CRCO	Arthropoda	Crustacea	Hexanauplii	Copepoda	Calanoida	Calanidae	Calanus glacialis	A	3	0.03482	0.01161	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-150	BAFF21UMLNGN25ARCH04	18-Aug-21	75	50	5.37191	Planktonic	CRMY	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Mysida		Mysida indet.	J	2	0.01246	0.00623	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-150	BAFF21UMLNGN25ARCH04	18-Aug-21	75	50	5.37191	Epibenthic	PIXX	Chordata	Vertebrata	Actinopteri	Teleostei	Perciformes	Cottidae	Cottidae indet.	Int	1	1.14862	1.14862	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-150	BAFF21UMLNGN25ARCH04	18-Aug-21	75	50	5.37191	Epibenthic	PIXX	Chordata	Vertebrata	Actinopteri	Teleostei	Perciformes	Cottidae	Cottidae indet.	J/parts	9	1.13309	0.12590				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-150	BAFF21UMLNGN25ARCH04	18-Aug-21	75	50	5.37191	Undetermined	PIXX	Chordata	Vertebrata					Pisces indet.	Parts		1.23603	1.23603				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-150	BAFF21UMLNGN25ARCH04	18-Aug-21	75	50	5.37191	Undetermined	XXXX							Unidentified tissue	Parts		0.03561	0.03561				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-151	BAFF21UMLNGN25ARCH05	18-Aug-21	100	75	11.86079	Epibenthic	PIXX	Chordata	Vertebrata	Actinopteri	Teleostei	Perciformes	Cottidae	Cottidae indet.	J/parts	19	2.53012	0.13316	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-151	BAFF21UMLNGN25ARCH05	18-Aug-21	100	75	11.86079	Epibenthic	PIXX	Chordata	Vertebrata	Actinopteri	Teleostei	Perciformes	Cottidae	Myoxocephalus sp.	Int	3	3.13754	1.04585	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-151	BAFF21UMLNGN25ARCH05	18-Aug-21	100	75	11.86079	Undetermined	PIXX	Chordata	Vertebrata					Pisces indet.	J/parts	1	0.09218	0.09218				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-151	BAFF21UMLNGN25ARCH05	18-Aug-21	100	75	11.86079	Undetermined	PIXX	Chordata	Vertebrata					Pisces indet.	Parts		1.71934	1.71934				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-152	BAFF21UMLNGN25ARCH06	18-Aug-21	100	50	30.32764	Parasite	ACAN	Acanthocephala						Acanthocephala indet.	A	1	0.00249	0.00249	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-152	BAFF21UMLNGN25ARCH06	18-Aug-21	100	50	30.32764	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Hyperiidae	Themisto libellula	A/parts	150	6.91222	0.04608	1			Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-152	BAFF21UMLNGN25ARCH06	18-Aug-21	100	50	30.32764	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Hyperiidea indet.	Parts		6.15721	6.15721				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-152	BAFF21UMLNGN25ARCH06	18-Aug-21	100	50	30.32764	Undetermined	XXXX							Unidentified tissue	Parts		0.02963	0.02963				Some organisms found outside stomach.
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-153	BAFF21UMLNGN25ARCH13	18-Aug-21	75	50	13.05528	Benthic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Gammaridae	Gammarus sp.	A	1	0.04998	0.04998	1			
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-153	BAFF21UMLNGN25ARCH13	18-Aug-21	75	50	13.05528	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Hyperiidae	Themisto libellula	A/parts	29	1.09408	0.03773	1			
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-153	BAFF21UMLNGN25ARCH13	18-Aug-21	75	50	13.05528	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	Onisimus sp.	Int	1	0.00271	0.00271	1			
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-153	BAFF21UMLNGN25ARCH13	18-Aug-21	75	50	13.05528	Planktonic	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda	Uristidae	Onisimus sp.	A	2	0.04482	0.02241				
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-153	BAFF21UMLNGN25ARCH13	18-Aug-21	75	50	13.05528	Undetermined	CRAM	Arthropoda	Crustacea	Malacostraca	Eumalacostraca	Amphipoda		Amphipoda indet.	Parts		0.82836	0.82836				
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-153	BAFF21UMLNGN25ARCH13	18-Aug-21	75	50	13.05528	Undetermined	PIXX	Chordata	Vertebrata					Pisces indet.	Int/parts	1	0.99605	0.99605	1			
Golder	Baffinlands	2021	Fish Stomach	Arctic Char	ms21-042-153	BAFF21UMLNGN25ARCH13	18-Aug-21	75	50	13.05528	Undetermined	XXXX							Unidentified tissue	Parts		0.88038	0.88038				

APPENDIX 8C-1

Settlement Basket and Plate Taxa Identifications

Appendix 8C-1

Settlement Basket and Plate Taxa Identifications

Phylum Class/Order	Family	Taxa	Settlement Substrate	
			Baskets	Plates
Annelida				
Clitellata/-	-	Hirudinea indet.	X	X
Polychaeta/Phyllodocida	Hesionidae	Hesionidae indet.	X	X
Polychaeta/Phyllodocida	Hesionidae	*Nereimyra aphroditoides*	X	X
Polychaeta/Phyllodocida	Nephtyidae	*Micronephthys cornuta*	X	
Polychaeta/Phyllodocida	Nereididae	*Nereis zonata*	X	
Polychaeta/Phyllodocida	Nereididae	Nereididae indet.	X	
Polychaeta/Phyllodocida	Pholoidae	*Pholoe longa*	X	
Polychaeta/Phyllodocida	Pholoidae	*Pholoe minuta*	X	X
Polychaeta/Phyllodocida	Pholoidae	*Pholoe* sp.	X	
Polychaeta/Phyllodocida	Phyllodocidae	*Eteone* sp.	X	X
Polychaeta/Phyllodocida	Phyllodocidae	*Phyllodoce* sp.	X	
Polychaeta/Phyllodocida	Phyllodocidae	Phyllodocidae indet.		X
Polychaeta/Phyllodocida	Polynoidae	*Gattyana cirrhosa*	X	
Polychaeta/Phyllodocida	Polynoidae	*Harmothoe imbricata*	X	X
Polychaeta/Phyllodocida	Polynoidae	*Harmothoe rarispina*	X	
Polychaeta/Phyllodocida	Polynoidae	Polynoinae indet.	X	X
Polychaeta/Phyllodocida	Polynoidae	*Harmothoe* sp.	X	
Polychaeta/Phyllodocida	Syllidae	*Pionosyllis* sp.	X	X
Polychaeta/Phyllodocida	Syllidae	Syllidae indet.		X
Polychaeta/Sabellida	Sabellidae	Dialychone sp. 3	X	
Polychaeta/Sabellida	Sabellidae	*Euchone incolor*	X	
Polychaeta/Sabellida	Sabellidae	*Euchone* sp.	X	
Polychaeta/Sabellida	Sabellidae	Sabellidae indet.	X	
Polychaeta/Sabellida	Serpulidae	*Circeis* sp.	X	
Polychaeta/Sabellida	Serpulidae	Serpulidae indet.	X	
Polychaeta/Spionida	Spionidae	*Marenzelleria* sp.	X	
Polychaeta/Spionida	Spionidae	*Scolelepis* sp.	X	
Polychaeta/Spionida	Spionidae	Spionidae indet.	X	X
Polychaeta/Terebellida	Ampharetidae	*Ampharete* sp.	X	
Polychaeta/Terebellida	Ampharetidae	Ampharetidae indet.	X	
Polychaeta/Terebellida	Cirratulidae	*Chaetozone bathyala*	X	
Polychaeta/Terebellida	Cirratulidae	*Chaetozone* sp.	X	
Polychaeta/Terebellida	Pectinariidae	*Cistenides granulata*	X	
Polychaeta/Terebellida	Terebellidae	Terebellidae indet.	X	X
Polychaeta/Terebellida	Trichobranchidae	*Terebellides* sp.	X	
Polychaeta/-	Capitellidae	Mediomastus sp.	X	
Polychaeta/-	Cossuridae	Cossura longocirrata	X	
Polychaeta/-	Scalibregmatidae	Scalibregma inflatum	X	
Polychaeta/-	Scalibregmatidae	Scalibregmatidae indet.		X
Arthropoda				
Arachnida/-	-	Acari indet.	X	X
Malacostraca/Amphipoda	Atylidae	*Atylus carinatus*	X	
Malacostraca/Amphipoda	Calliopiidae	Calliopiidae indet.	X	X
Malacostraca/Amphipoda	Calliopiidae	*Apherusa* sp.	X	
Malacostraca/Amphipoda	Corophiidae	*Crassicorophium* sp.	X	
Malacostraca/Amphipoda	Corophiidae	Corophiidae indet.	X	
Malacostraca/Amphipoda	Dexaminidae	*Guernea nordenskioldi*	X	
Malacostraca/Amphipoda	Gammaridae	*Gammarus oceanicus*		X
Malacostraca/Amphipoda	Gammaridae	*Gammarus* sp.	X	X
Malacostraca/Amphipoda	Ischyroceridae	*Ischyrocerus anguipes*		X
Malacostraca/Amphipoda	Oedicerotidae	*Monoculopsis* sp.	X	
Malacostraca/Amphipoda	Oedicerotidae	*Paroediceros lynceus*	X	
Malacostraca/Amphipoda		Lysianassoidea indet.	X	
Malacostraca/Decapoda	Thoridae	*Lebbeus polaris*	X	
Ostracoda/Myodocopida	Philomedidae	*Philomedes* sp.	X	
Thecostraca/Balanomorpha	-	Balanomorpha indet.	X	X

Appendix 8C-1

Settlement Basket and Plate Taxa Identifications

Bryozoa				
-/-	-	Bryozoa indet.	X	
Stenolaemata/Cyclostomatida	Lichenoporidae	Lichenoporidae indet.		X
Stenolaemata/Cyclostomatida	Lichenoporidae	***Lichenopora* sp.**	X	
Stenolaemata/Cyclostomatida	Tubuliporidae	Tubuliporidae indet.	X	
Chlorophyta				
Ulvophyceae/Acrosiphoniales	Acrosiphoniaceae	***Spongomorpha aeruginosa***	X	X
Ulvophyceae/Cladophorales	Cladophoraceae	***Rhizoclonium* sp.**		X
Ulvophyceae/Ulotrichales	Ulotrichaceae	***Ulothrix* sp.**		X
Ulvophyceae/Ulotrichales	Ulotrichaceae	**Ulotrichaceae indet.**		X
Ulvophyceae/Ulvales	Ulvaceae	***Ulva* cf. *prolifera***	X	
Chordata				
Ascidiacea/Stolidobranchia	Molgulidae	*Molgula* sp.	X	X
Ciliophora				
-/-	-	**Ciliophora indet.**	X	
Cnidaria				
Anthozoa/Actiniaria	-	Actiniaria indet.	X	X
Hydrozoa/Anthoathecata	Corynidae	***Sarsia* sp.**	X	X
Hydrozoa/Anthoathecata	-	Anthoathecata indet.	X	
Hydrozoa/Leptothecata	Campanulariidae	Campanulariidae indet.	X	X
Echinodermata				
Asteroidea/Forcipulatida	Asteriidae	***Leptasterias* (*Leptasterias*) *mu***	X	
Echinoidea/Camarodonta	Strongylocentrotidae	*Strongylocentrotus droebachiens*	X	
Ophiuroidea/Ophiurida	Ophiuridae	*Ophiura sarsii*	X	
Foraminifera				
-/-	-	**Foraminifera indet.**	X	
Mollusca				
Bivalvia/-	-	Bivalvia indet.	X	X
Bivalvia/Adapedonta	Hiatellidae	*Hiatella arctica*	X	X
Bivalvia/Carditida	Astartidae	*Astarte* sp.	X	
Bivalvia/Carditida	Astartidae	*Astarte borealis*	X	
Bivalvia/Carditida	Astartidae	*Astarte montagui*	X	
Bivalvia/Myida	Myidae	*Mya* sp.	X	X
Bivalvia/Mytilida	Mytilidae	***Arvella faba***	X	
Bivalvia/Mytilida	Mytilidae	*Musculus discors*	X	X
Bivalvia/Mytilida	Mytilidae	*Musculus* sp.	X	X
Bivalvia/Mytilida	Mytilidae	Mytilidae indet.	X	X
Bivalvia/Nuculanida	Nuculanidae	*Nuculana minuta*	X	
Bivalvia/Nuculida	Nuculidae	*Ennucula tenuis*	X	
Gastropoda/-	-	Gastropoda indet.		X
Gastropoda/-	-	Patellogastropoda indet.	X	
Gastropoda/-	Lottiidae	*Testudinalia testudinalis*	X	
Gastropoda/Nudibranchia	Dendronotidae	***Dendronotus* sp.**	X	
Gastropoda/Trochida	Margaritidae	*Margarites groenlandicus*	X	
Gastropoda/Trochida	Margaritidae	*Margarites helicinus*	X	
Ochrophyta				
Phaeophyceae/Ectocarpales	Acinetosporaceae	***Pylaiella* cf. *varia***	X	X
Phaeophyceae/Ectocarpales	Chordariaceae	**cf. *Trachynema groenlandicum***	X	X
Phaeophyceae/Ectocarpales	Chordariaceae	**Chordariaceae indet.**	X	
Phaeophyceae/Fucales	Fucaceae	cf. *Fucus distichus*	X	
Phaeophyceae/Sphacelariales	-	Sphacelariales indet.	X	X

Notes: taxa identified to the lowest practical taxonomic level; indet.= indeterminate (taxa which could not be identified beyond the taxonomic level listed); sp.=species; cf.=compare with (taxa is an inexact match to the designated taxa.
Taxa in bold indicate new observations in MEEMP and NIS/AIS programs
All taxa cross-referenced with NIS/AIS resources: Fofonoff et al. 2022, ISSG 2022, Rius et al. 2022, Molnar et al. 2008, Casas-Monroy et al. 2014

APPENDIX 8C-2

Settlement Substrate Lab Data

biologica

Raw abundance data in long format for Golder Baffinland Iron Mine MEEMP, 2021 Quadrat Plates and Freight Dock Y2 Settlement Plates and Baskets.

Client	Project	Year	Sample Type	Biologica Sample ID	Client Sample ID	Date Sampled	Organism Type	taxcode	grpcode	Phylum	Class	Order	Family	Subfamily	Taxon Name	A	Int	J	Total Abundance	Unique Taxa Count	Percent Cover	Comment
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Mobile	ARTH	CHAR	Arthropoda	Arachnida				Acari indet.	5			5	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ARTH	CHAR	Arthropoda	Arachnida				Acari indet.	4			4	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Mobile	ARTH	CHAR	Arthropoda	Arachnida				Acari indet.	1			1	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Mobile	ARTH	CHAR	Arthropoda	Arachnida				Acari indet.	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Attached	MISC	CNAN	Cnidaria	Anthozoa	Actiniaria			Actiniaria indet.			1	1	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Attached	MISC	CNAN	Cnidaria	Anthozoa	Actiniaria			Actiniaria indet.			2	2	1	2	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-066	East D Plate 1	14-Aug-21	Attached	MISC	CNAN	Cnidaria	Anthozoa	Actiniaria			Actiniaria indet.			1	1	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	MISC	CNAN	Cnidaria	Anthozoa	Actiniaria			Actiniaria indet.		1		1	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Ampharetidae	Ampharetinae	Ampharete sp.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Ampharetidae		Ampharetidae indet.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Anthoathecata			Anthoathecata indet.				Present		2	On one bivalve
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae		Apherusa sp.	2			2	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Crenellinae	Arvella faba	1			1	1	2	Name updated. Previously Crenella faba
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Carditida	Astartidae		Astarte borealis		1		1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Carditida	Astartidae		Astarte montagui		1		1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Carditida	Astartidae		Astarte montagui		2	1	3	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Carditida	Astartidae		Astarte sp.			1	1		1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Carditida	Astartidae	Musculinae	Astarte sp.		1		1	1	1	Damaged
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Atylidae	Atylinae	Atylus carinatus	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-067	Centre D Plate 1	14-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Primarily cypris
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Juvenile and cypris
Golder	Baffinlands	2021	Settlement Plate	mb21-042-064	Centre M Plate 1	10-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Primarily cypris
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Juvenile and cypris, newly settled
Golder	Baffinlands	2021	Settlement Plate	mb21-042-061	Centre S Plate 1	14-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Sparse
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Juvenile and cypris
Golder	Baffinlands	2021	Settlement Plate	mb21-042-066	East D Plate 1	14-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Primarily cypris
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Juvenile and cypris
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Found along the ridge
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Juvenile and cypris
Golder	Baffinlands	2021	Settlement Plate	mb21-042-060	East S Plate 1	10-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Sparse, <5%, juvenile and cypris
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-035	Q10-Plate 1	8-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Sparse, <5%, juvenile and cypris
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-027	Q1-Plate 1	14-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Cypris newly settled
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-028	Q3-Plate 1	15-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Primarily juvenile, some cypris
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-029	Q4-Plate 1	6-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Cypris newly settled
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-031	Q6-Plate 1	8-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Cypris newly settled
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-032	Q7-Plate 1	16-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-033	Q8-Plate 1	16-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Juvenile and cypris
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present		2	Primarily cypris, newly settled
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Primarily juvenile, Newly settled
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Primarily cypris
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Juvenile and cypris. 1 damaged adult
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Attached	ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha			Balanomorpha indet.				Present	1	2	Sparse, along the ridge
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia				Bivalvia indet.	1			1		1	Damaged
Golder	Baffinlands	2021	Settlement Plate	mb21-042-067	Centre D Plate 1	14-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia				Bivalvia indet.		1		1		1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia				Bivalvia indet.		3		3		1	Damaged/very small
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia				Bivalvia indet.		1		1		1	Damaged
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia				Bivalvia indet.		2		2		1	Damaged x1
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia				Bivalvia indet.		1		1		1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia				Bivalvia indet.		2		Present		1	Damaged
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-031	Q6-Plate 1	8-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia				Bivalvia indet.		10		10		1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia				Bivalvia indet.		1		1		1	Damaged/very small
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia				Bivalvia indet.		3		3		1	Damaged/very small
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	MISC	BRYO	Bryozoa					Bryozoa indet.		1		1	1	2	Small colony
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae	Musculinae	Calliopiidae indet.	2			2	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae		Calliopiidae indet.	34	1		35	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae		Calliopiidae indet.		1		1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae		Calliopiidae indet.		1		1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae		Calliopiidae indet.	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae		Calliopiidae indet.	3			3	1	1	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-035	Q10-Plate 1	8-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae		Calliopiidae indet.		1		1	1	1	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-034	Q9-Plate 1	11-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae		Calliopiidae indet.		1		1	1	1	Damaged
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae		Calliopiidae indet.	18	1		19		1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae		Calliopiidae indet.		3		3	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Calliopiidae		Calliopiidae indet.		1		1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2	On 1 rock
Golder	Baffinlands	2021	Settlement Plate	mb21-042-067	Centre D Plate 1	14-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2	Sparse
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-061	Centre S Plate 1	14-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2	1 colony
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-066	East D Plate 1	14-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2	Sparse
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2	Sparse

Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-035	Q10-Plate 1	8-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-027	Q1-Plate 1	14-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-029	Q4-Plate 1	6-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-030	Q5-Plate 1	6-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-031	Q6-Plate 1	8-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2	<3% coverage, no gonangium present to identify further			
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-034	Q9-Plate 1	11-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2	Sparse			
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Campanulariidae		Campanulariidae indet.				Present	1	2	Sparse			
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Fucales	Fucaceae		cf. Fucus distichus				Present	1	2	Degraded			
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-064	Centre M Plate 1	10-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-035	Q10-Plate 1	8-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-029	Q4-Plate 1	6-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-034	Q9-Plate 1	11-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		cf. Trachynema groenlandicum				Present	1	2				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Cirratulidae	Musculinae	Chaetozone bathyala	3			3	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Cirratulidae	Musculinae	Chaetozone sp.		1	1	2		1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Cirratulidae		Chaetozone sp.		1	1	2	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae		Chordariaceae indet.				Present		2				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Attached	MEMO	MEMO	Ciliophora					Ciliophora indet.				Present		2	Over a few rocks, possibly Metafolliculina			
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Attached	ANNE	POSE	Annelida	Polychaeta	Sabellida	Serpulidae	Spirorbinae	Circeis sp.		1		1	1	2				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Pectinariidae	Musculinae	Cistenides granulata	1			1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Corophiidae		Corophiidae indet.			1	1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta		Cossuridae	Musculinae	Cossura longocirrata	1	1		2	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta		Cossuridae		Cossura longocirrata	1			1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Corophiinae	Crassicorophium sp.		1		1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Corophiidae	Corophiinae	Crassicorophium sp.	2			2	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	MOLL	MOGA	Mollusca	Gastropoda	Nudibranchia	Dendronotidae		Dendronotus sp.		1		1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	MOLL	MOGA	Mollusca	Gastropoda	Nudibranchia	Dendronotidae		Dendronotus sp.			1	1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellinae	Dialychone sp. 3		1	2	3	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	MEMO	MEMO					Musculinae	Egg/egg mass				Present		1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	MEMO	MEMO						Egg/egg mass				Present		1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	MEMO	MEMO						Egg/egg mass				Present		1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Mobile	MEMO	MEMO						Egg/egg mass				Present		1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Attached	MEMO	MEMO						Empty Polychaeta tube	1			1		2	Tube similar to Nothria			
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Nuculida	Nuculidae		Ennucula tenuis		1		1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteone sp.			1	1	1	1				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-064	Centre M Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteone sp.			1	1	1	1				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-066	East D Plate 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteone sp.			1	1	1	1				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-060	East S Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteone sp.			1	1	1	1				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-035	Q10-Plate 1	8-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteone sp.			1	1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteone sp.			2	2	1	1				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteone sp.			1	1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteone sp.			9	9	1	1				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eteoninae	Eteone sp.			4	4	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellinae	Euchone incolor	1			1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae	Sabellinae	Euchone sp.		4		4		1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Attached	MISC	FORA						Foraminifera indet.	10			10	1	2	On one rock			
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	MISC	FORA						Foraminifera indet.	1			1	1	2				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Gammaridae		Gammarus oceanicus	1			1	1	1				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-060	East S Plate 1	10-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Gammaridae		Gammarus sp.		1		1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Gammaridae		Gammarus sp.		1		1	1	1				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Mobile	MOLL	MOGA	Mollusca	Gastropoda				Gastropoda indet.			1	1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Musculinae	Gattyana cirrhosa	1			1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Gattyana cirrhosa	1			1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Dexaminidae	Prophliantinae	Guernea nordenskioldi	2			2	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Musculinae	Harmothoe imbricata	4			4	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Harmothoe imbricata	3			3	1	1				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-027	Q1-Plate 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Harmothoe imbricata	1			1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Harmothoe imbricata	3			3	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Musculinae	Harmothoe rarispina	1			1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Harmothoe sp.		1		1	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae	Musculinae	Hesionidae indet.			5	5		1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			1	1	1	1				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-064	Centre M Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			2	2	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			1	1		1				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-066	East D Plate 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			6	6	1	1				
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			1	1		1				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			2	2	1	1				
Golder	Baffinlands	2021	Settlement Plate	mb21-042-060	East S Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			28	28	1	1				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-035	Q10-Plate 1	8-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			62	62	1	1				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-027	Q1-Plate 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			1	1	1	1				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-029	Q4-Plate 1	6-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			2	2	1	1				
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-030	Q5-Plate 1	6-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			9	9		1				

Golder	Baffinlands	2021	Quadrat Plate	mb21-042-033	Q8-Plate 1	16-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			7	7	1	1		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-034	Q9-Plate 1	11-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			250	250		1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			90	90		1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			14	14		1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			10	10		1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			312	312	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.	1		2	3	1	1	Damaged	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Hesionidae indet.			7	7		1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			4	4	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-067	Centre D Plate 1	14-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			25	25	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			27	27	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-064	Centre M Plate 1	10-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			8	8	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica		1	6	7	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			6	6	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-066	East D Plate 1	14-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			36	36	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			14	14	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			23	23	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			28	28	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-060	East S Plate 1	10-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			1	1	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-035	Q10-Plate 1	8-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			28	28	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-027	Q1-Plate 1	14-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			1	1	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-028	Q3-Plate 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			4	4	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-029	Q4-Plate 1	6-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			18	18	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-030	Q5-Plate 1	6-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			43	43	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-031	Q6-Plate 1	8-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			77	77	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-032	Q7-Plate 1	16-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			17	17	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-033	Q8-Plate 1	16-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			6	6	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-034	Q9-Plate 1	11-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			23	23	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			32	32	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			21	21	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			13	13	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			19	19	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			13	13	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Hiatellidae		Hiatella arctica			8	8	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	ANHI	Annelida	Clitellata				Hirudinea indet.			1	1	1	1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Mobile	ANNE	ANHI	Annelida	Clitellata				Hirudinea indet.			1	1	1	1		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-034	Q9-Plate 1	11-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Ischyroceridae	Ischyrocerinae	Ischyrocerus anguipes			1	1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ARTH	CRDE	Arthropoda	Malacostraca	Decapoda	Thoridae		Lebbeus polaris	1			1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ECHI	ECAS	Echinodermata	Asteroidea	Forcipulatida	Asteriidae		Leptasterias (Leptasterias) muelleri			2	2	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Attached	MISC	BRYO	Bryozoa	Stenolaemata	Cyclostomatida	Lichenoporidae		Lichenopora sp.	1			1	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Attached	MISC	BRYO	Bryozoa	Stenolaemata	Cyclostomatida	Lichenoporidae		Lichenopora sp.	1			1	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	MISC	BRYO	Bryozoa	Stenolaemata	Cyclostomatida	Lichenoporidae		Lichenopora sp.	2			2	1	2	1cm in diameter	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-031	Q6-Plate 1	8-Aug-21	Attached	MISC	BRYO	Bryozoa	Stenolaemata	Cyclostomatida	Lichenoporidae		Lichenoporidae indet.	1			1	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-033	Q8-Plate 1	16-Aug-21	Attached	MISC	BRYO	Bryozoa	Stenolaemata	Cyclostomatida	Lichenoporidae		Lichenoporidae indet.	1			1	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda			Lysianassoidea indet.			2	2	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Marenzelleria sp.		1		1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	MOLL	MOGA	Mollusca	Gastropoda	Trochida	Margaritidae	Musculinae	Margarites groenlandicus		1		1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	MOLL	MOGA	Mollusca	Gastropoda	Trochida	Margaritidae	Musculinae	Margarites helicinus	2			2	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	MOLL	MOGA	Mollusca	Gastropoda	Trochida	Margaritidae		Margarites helicinus	1			1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta		Capitellidae		Mediomastus sp.			1	1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Nephtyidae	Musculinae	Micronephthys cornuta	1			1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Nephtyidae		Micronephthys cornuta	1			1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Attached	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Molgulidae		Molgula sp.			1	1	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Attached	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Molgulidae		Molgula sp.		2	1	3	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Attached	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Molgulidae		Molgula sp.		1		1	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-060	East S Plate 1	10-Aug-21	Attached	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Molgulidae		Molgula sp.	1			1	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-035	Q10-Plate 1	8-Aug-21	Attached	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Molgulidae		Molgula sp.		2		2	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Attached	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Molgulidae		Molgula sp.	3		2	5	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Molgulidae		Molgula sp.		1		1	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Attached	MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Molgulidae		Molgula sp.		2		2	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae		Monoculopsis sp.			1	1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus discors		1		1	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus discors	1			1	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus discors	1	5		6	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus sp.			1	1	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-032	Q7-Plate 1	16-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus sp.			1	1	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus sp.			23	23		2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus sp.		2	8	10		2	Damaged/very small	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus sp.			3	3	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae	Musculinae	Musculus sp.			1	1	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Myida	Myidae		Mya sp.			1	1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Myida	Myidae		Mya sp.			8	8	1	1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-064	Centre M Plate 1	10-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Myida	Myidae		Mya sp.			1	1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Myida	Myidae		Mya sp.			6	6	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Myida	Myidae		Mya sp.			1	1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Myida	Myidae		Mya sp.			5	Present	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Myida	Myidae		Mya sp.			1	1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Myida	Myidae		Mya sp.			9	9	1	1	Damaged/very small	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			8	8	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			3	3		2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			2	2	1	2		

Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			6	6	1	2	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-035	Q10-Plate 1	8-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			2	2	1	2	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-030	Q5-Plate 1	6-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			1	1	1	2	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-031	Q6-Plate 1	8-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			1	1	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			150	150		2	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			42	42		2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			341	341		2	Damaged/very small
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			13	13		2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Mytilidae		Mytilidae indet.			3	3	1	2	Damaged/very small
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Nereididae		Nereididae indet.			1	1		1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae	Musculinae	Nereimyra aphroditoides	2			2	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides			1	1	1	1	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-030	Q5-Plate 1	6-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides	1			1	1	1	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-034	Q9-Plate 1	11-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides	2	3		5	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides	1		1	2	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides	2	2		4	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Hesionidae		Nereimyra aphroditoides	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereidinae	Nereis zonata	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Nereididae	Nereidinae	Nereis zonata	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	MOLL	MOBI	Mollusca	Bivalvia	Nuculanida	Nuculanidae	Nuculaninae	Nuculana minuta	2			2	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ECHI	ECOP	Echinodermata	Ophiuroidea	Ophiurida	Ophiuridae	Ophiurinae	Ophiura sarsii		1		1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Oedicerotidae		Paroediceros lynceus	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Attached	MOLL	MOGA	Mollusca	Gastropoda				Patellogastropoda indet.			3	3	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ARTH	CROS	Arthropoda	Ostracoda	Myodocopida	Philomedidae	Musculinae	Philomedes sp.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae	Musculinae	Pholoe longa	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe longa	1			1	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-066	East D Plate 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	2			2	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	2			2	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	5			5	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	3			3	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	4			4	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	2			2	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe minuta	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Pholoidae		Pholoe sp.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Phyllodocinae	Phyllodoce sp.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae		Phyllodocidae indet.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae		Phyllodocidae indet.			1	1		1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Phyllodocidae		Phyllodocidae indet.			3	3		1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Syllidae	Eusyllinae	Pionosyllis sp.	1			1	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-066	East D Plate 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Syllidae	Eusyllinae	Pionosyllis sp.	2			2	1	1	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-030	Q5-Plate 1	6-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Syllidae	Eusyllinae	Pionosyllis sp.	1			1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Musculinae	Polynoinae indet.			7	7		1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			40	40	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-064	Centre M Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			2	2	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			11	11	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-061	Centre S Plate 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			2	2		1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-066	East D Plate 1	14-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			2	2	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			4	4		1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			6	6	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			31	31		1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-060	East S Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			4	4	1	1	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-035	Q10-Plate 1	8-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			7	7	1	1	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-032	Q7-Plate 1	16-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			2	2	1	1	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-034	Q9-Plate 1	11-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			3	3	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.		2	57	59		1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.		1	7	8	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			16	16	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			34	34	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			43	43	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	2	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-064	Centre M Plate 1	10-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	2	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	2	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-027	Q1-Plate 1	14-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	2	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-033	Q8-Plate 1	16-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	2	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae		Pylaiella cf. varia				Present	1	2	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Cladophorales	Cladophoraceae		Rhizoclonium sp.				Present	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae		Sabellidae indet.			2	2	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae		Sabellidae indet.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae		Sabellidae indet.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae		Sabellidae indet.			1	1	1	1	

Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Sabellida	Sabellidae		Sabellidae indet.		2	2	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Anthoathecata	Corynidae		Sarsia sp.			Present	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Anthoathecata	Corynidae		Sarsia sp.			Present	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-066	East D Plate 1	14-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Anthoathecata	Corynidae		Sarsia sp.			Present	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Anthoathecata	Corynidae		Sarsia sp.			Present	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	MISC	CNHY	Cnidaria	Hydrozoa	Anthoathecata	Corynidae		Sarsia sp.			Present	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta		Scalibregmatidae	Musculinae	Scalibregma inflatum		1	1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta		Scalibregmatidae		Scalibregma inflatum	1	1	2	1	1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta		Scalibregmatidae		Scalibregmatidae indet.		1	1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Scolelepis sp.	1		1	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Attached	ANNE	POSE	Annelida	Polychaeta	Sabellida	Serpulidae		Serpulidae indet.	4	2	6	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	ANNE	POSE	Annelida	Polychaeta	Sabellida	Serpulidae		Serpulidae indet.	1	4	5	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-033	Q8-Plate 1	16-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Sphacelariales			Sphacelariales indet.			Present	1	2	Possibly Battersia cf. arctica, Protohalopteris radicans, or Sphaceloderma caespitulum	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Attached	ALGAE	ALGAE	Ochrophyta	Phaeophyceae	Sphacelariales			Sphacelariales indet.			Present	1	2	Possibly Battersia cf. arctica, Protohalopteris radicans, or Sphaceloderma caespitulum	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-073	Centre M Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		11	11		1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-064	Centre M Plate 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		19	19	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		9	9	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		1	1	1	1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-066	East D Plate 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		2	2	1	1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		2	2	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		12	12	1	1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-060	East S Plate 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		39	39	1	1		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-035	Q10-Plate 1	8-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		30	30	1	1		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-029	Q4-Plate 1	6-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		2	2	1	1		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-030	Q5-Plate 1	6-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		2	2	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		19	19	1	1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		15	15	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		12	12	1	1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		37	37	1	1		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		132	132		1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Spionida	Spionidae		Spionidae indet.		37	37	1	1		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-064	Centre M Plate 1	10-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-061	Centre S Plate 1	14-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-060	East S Plate 1	10-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-031	Q6-Plate 1	8-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-034	Q9-Plate 1	11-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-065	West M Plate 1	15-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	3		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Acrosiphoniales	Acrosiphoniaceae		Spongomorpha aeruginosa			Present	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ECHI	ECEC	Echinodermata	Echinoidea	Camarodonta	Strongylocentrotidae		Strongylocentrotus droebachiensis		1	1	2	1	1	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Mobile	ANNE	POER	Annelida	Polychaeta	Phyllodocida	Syllidae		Syllidae indet.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-070	Centre S Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae		Terebellidae indet.			2	2	1	1	In tube
Golder	Baffinlands	2021	Settlement Basket	mb21-042-075	East D Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae		Terebellidae indet.		1		1	1	1	Damaged
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-027	Q1-Plate 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae		Terebellidae indet.			1	1	1	1	In a tube on the lid
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-028	Q3-Plate 1	15-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae		Terebellidae indet.			1	1	1		
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-031	Q6-Plate 1	8-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae		Terebellidae indet.			2	2	1	1	
Golder	Baffinlands	2021	Quadrat Plate	mb21-042-033	Q8-Plate 1	16-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae		Terebellidae indet.			1	1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-071	West S Basket 1	10-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Terebellidae		Terebellidae indet.			3	3	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Mobile	ANNE	POSE	Annelida	Polychaeta	Terebellida	Trichobranchidae	Musculinae	Terebellides sp.		1		1	1	1	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-069	East S Basket 1	10-Aug-21	Attached	MOLL	MOGA	Mollusca	Gastropoda		Lottiidae		Testudinalia testudinalis		1		1	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Attached	MOLL	MOGA	Mollusca	Gastropoda		Lottiidae		Testudinalia testudinalis		1		1	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-074	West M Basket 1	15-Aug-21	Attached	MOLL	MOGA	Mollusca	Gastropoda		Lottiidae		Testudinalia testudinalis		1		1	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-076	Centre D Basket 1	14-Aug-21	Attached	MISC	BRYO	Bryozoa	Stenolaemata	Cyclostomatida	Tubuliporidae		Tubuliporidae indet.			1	1	1	2	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	MISC	BRYO	Bryozoa	Stenolaemata	Cyclostomatida	Tubuliporidae		Tubuliporidae indet.			4	4	1	2	Just settling
Golder	Baffinlands	2021	Settlement Plate	mb21-042-063	East M Plate 1	15-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Ulotrichales	Ulotrichaceae		Ulothrix sp.			Present	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-062	West S Plate 1	10-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Ulotrichales	Ulotrichaceae		Ulothrix sp.			Present	1	2		
Golder	Baffinlands	2021	Settlement Plate	mb21-042-060	East S Plate 1	10-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Ulotrichales	Ulotrichaceae		Ulotrichaceae indet.			Present	1	2	Ulothrix and/or Urospora neglecta	
Golder	Baffinlands	2021	Settlement Plate	mb21-042-068	West D Plate 1	15-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Ulotrichales	Ulotrichaceae		Ulotrichaceae indet.			Present	1	2	Ulothrix and/or Urospora neglecta	
Golder	Baffinlands	2021	Settlement Basket	mb21-042-072	East M Basket 1	15-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Ulvales	Ulvaceae		Ulva cf. prolifera			Present	1	2		
Golder	Baffinlands	2021	Settlement Basket	mb21-042-077	West D Basket 1	15-Aug-21	Attached	ALGAE	ALGAE	Chlorophyta	Ulvophyceae	Ulvales	Ulvaceae		Ulva cf. prolifera			Present	1	2		
																67	49	189				
																116	121	2746				

APPENDIX 8D-1

Taxa Identifications from Samples Collected for DNA Analysis

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Taxa Identifications from Samples Collected for DNA Analysis

Phylum Class/Order	Family	Subfamily	Taxa
Annelida			
Polychaeta/Echiuroidea	Echiuridae	-	*Echiurus echiurus*
Polychaeta/Echiuroidea	-	-	Echiuroidea indet.
Polychaeta/Eunicida	Dorvilleidae	-	*Ophryotrocha* sp.
Polychaeta/Eunicida	Lumbrineridae	-	Lumbrineridae indet.
Polychaeta/Eunicida	Lumbrineridae	-	*Scoletoma fragilis*
Polychaeta/Eunicida	Lumbrineridae	-	*Scoletoma* sp.
Polychaeta/Eunicida	Onuphidae	Onuphinae	*Nothria conchylega*
Polychaeta/Phyllodocida	Hesionidae	-	Hesionidae indet.
Polychaeta/Phyllodocida	Hesionidae	-	*Nereimyra aphroditoides*
Polychaeta/Phyllodocida	Nephtyidae	-	*Aglaophamus malmgreni*
Polychaeta/Phyllodocida	Nephtyidae	-	*Micronephthys cornuta*
Polychaeta/Phyllodocida	Nephtyidae	-	Nephtyidae indet.
Polychaeta/Phyllodocida	Nephtyidae	-	*Nephtys ciliata*
Polychaeta/Phyllodocida	Nereididae	Nereidinae	*Nereis zonata*
Polychaeta/Phyllodocida	Nereididae	-	Nereididae indet.
Polychaeta/Phyllodocida	Pholoidae	-	*Pholoe longa*
Polychaeta/Phyllodocida	Pholoidae	-	*Pholoe minuta*
Polychaeta/Phyllodocida	Pholoidae	-	*Pholoe* sp.
Polychaeta/Phyllodocida	Phyllodocidae	Eteoninae	*Eteone longa* complex
Polychaeta/Phyllodocida	Phyllodocidae	Eteoninae	*Eteone* sp.
Polychaeta/Phyllodocida	Phyllodocidae	Phyllodocinae	*Phyllodoce groenlandica*
Polychaeta/Phyllodocida	Phyllodocidae	Phyllodocinae	*Phyllodoce* sp.
Polychaeta/Phyllodocida	Phyllodocidae	-	Phyllodocidae indet.
Polychaeta/Phyllodocida	Polynoidae	Polynoinae	*Gattyana cirrhosa*
Polychaeta/Phyllodocida	Polynoidae	Polynoinae	*Harmothoe imbricata*
Polychaeta/Phyllodocida	Polynoidae	Polynoinae	*Harmothoe rarispina*
Polychaeta/Phyllodocida	Polynoidae	Polynoinae	*Harmothoe* sp.
Polychaeta/Phyllodocida	Polynoidae	Polynoinae	Polynoinae indet.
Polychaeta/Phyllodocida	Sphaerodoridae	-	*Sphaerodoropsis biserialis*
Polychaeta/Phyllodocida	Sphaerodoridae	-	*Sphaerodoropsis minuta*
Polychaeta/Phyllodocida	Syllidae	Anoplosyllinae	*Streptospinigera niuqtuut*
Polychaeta/Phyllodocida	Syllidae	Exogoninae	*Exogone* sp.
Polychaeta/Sabellida	Fabriciidae	-	Fabriciidae indet.
Polychaeta/Sabellida	Fabriciidae	-	***Pseudofabricia* sp. nr. *aberrans***
Polychaeta/Sabellida	Oweniidae	-	*Galathowenia oculata*
Polychaeta/Sabellida	Oweniidae	-	*Myriochele* sp.
Polychaeta/Sabellida	Sabellidae	Sabellinae	*Chone* sp.
Polychaeta/Sabellida	Sabellidae	Sabellinae	*Euchone incolor*
Polychaeta/Sabellida	Sabellidae	Sabellinae	*Euchone* sp.
Polychaeta/Sabellida	Sabellidae	-	Sabellidae indet.
Polychaeta/Sabellida	Serpulidae	Spirorbinae	*Bushiella* (*Jugaria*) *quadrangularis*
Polychaeta/Spionida	Spionidae	-	*Dipolydora quadrilobata*
Polychaeta/Spionida	Spionidae	-	*Dipolydora socialis*
Polychaeta/Spionida	Spionidae	-	***Marenzelleria* sp.**
Polychaeta/Spionida	Spionidae	-	*Prionospio* sp.
Polychaeta/Spionida	Spionidae	-	*Pygospio elegans*
Polychaeta/Spionida	Spionidae	-	*Scolelepis* sp.
Polychaeta/Spionida	Spionidae	-	*Spio* sp.
Polychaeta/Spionida	Spionidae	-	Spionidae indet.
Polychaeta/Terebellida	Ampharetidae	Ampharetinae	*Ampharete* sp.
Polychaeta/Terebellida	Ampharetidae	Ampharetinae	*Lysippe labiata*
Polychaeta/Terebellida	Ampharetidae	-	Ampharetidae indet.
Polychaeta/Terebellida	Ampharetidae	-	*Amphicteis* sp.
Polychaeta/Terebellida	Cirratulidae	-	*Aphelochaeta* sp.
Polychaeta/Terebellida	Cirratulidae	-	*Chaetozone pigmentata*
Polychaeta/Terebellida	Cirratulidae	-	*Chaetozone* sp.
Polychaeta/Terebellida	Cirratulidae	-	Cirratulidae indet.
Polychaeta/Terebellida	Pectinariidae	-	*Cistenides granulata*
Polychaeta/Terebellida	Pectinariidae	-	*Cistenides hyperborea*
Polychaeta/Terebellida	Pectinariidae	-	*Cistenides* sp.
Polychaeta/Terebellida	Terebellidae	Polycirrinae	*Polycirrus* sp. complex
Polychaeta/Terebellida	Terebellidae	Terebellinae	*Pista maculata*
Polychaeta/Terebellida	Terebellidae	Terebellinae	*Amphitrite cirrata*

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Taxa Identifications from Samples Collected for DNA Analysis

Polychaeta/Terebellida	Terebellidae	-	Terebellidae indet.
Polychaeta/Terebellida	Trichobranchidae	Trichobranchinae	*Terebellides* sp.
Polychaeta/Terebellida	Trichobranchidae	Trichobranchinae	*Terebellides stroemii*
Polychaeta/-	Capitellidae	-	*Capitella capitata* complex
Polychaeta/-	Capitellidae	-	Capitellidae indet.
Polychaeta/-	Capitellidae	-	*Mediomastus* sp.
Polychaeta/-	Capitellidae	-	*Notomastus* sp.
Polychaeta/-	Cossuridae	-	*Cossura longocirrata*
Polychaeta/-	Maldanidae	Euclymeninae	*Axiothella* sp.
Polychaeta/-	Maldanidae	Euclymeninae	Euclymeninae indet.
Polychaeta/-	Maldanidae	Maldaninae	*Maldane sarsi*
Polychaeta/-	Maldanidae	-	Maldanidae indet.
Polychaeta/-	Opheliidae	Opheliininae	*Ophelina* sp.
Polychaeta/-	Orbiniidae	Orbiniinae	*Leitoscoloplos* sp.
Polychaeta/-	Orbiniidae	Orbiniinae	*Scoloplos armiger*
Polychaeta/-	Orbiniidae	Orbiniinae	*Scoloplos* sp.
Polychaeta/-	Orbiniidae	-	Orbiniidae indet.
Polychaeta/-	Paraonidae	-	*Aricidea hartmanae*
Polychaeta/-	Paraonidae	-	*Aricidea minuta*
Polychaeta/-	Paraonidae	-	*Aricidea* sp.
Polychaeta/-	Scalibregmatidae	-	*Polyphysia baffinensis*
Polychaeta/-	Scalibregmatidae	-	*Scalibregma inflatum*
Polychaeta/-	-	-	Polychaete indet.
Arthropoda			
Insecta/Diptera	Chironomidae	-	Chironomidae indet.
Malacostraca/Amphipoda	Ampeliscidae	-	*Haploops* sp.
Malacostraca/Amphipoda	Atylidae	Atylinae	*Atylus* sp.
Malacostraca/Amphipoda	Corophiidae	-	Corophiidae indet.
Malacostraca/Amphipoda	Corophiidae	-	***Crassicorophium bonellii***
Malacostraca/Amphipoda	Dexaminoidae	Prophliantinae	*Guernea nordenskioldi*
Malacostraca/Amphipoda	Dulichiidae	-	Dulichiidae indet.
Malacostraca/Amphipoda	Oedicerotidae	-	*Arrhis* sp.
Malacostraca/Amphipoda	Oedicerotidae	-	*Monoculopsis* sp.
Malacostraca/Amphipoda	Oedicerotidae	-	Oedicerotidae indet.
Malacostraca/Amphipoda	Oedicerotidae	-	*Paroediceros* sp.
Malacostraca/Amphipoda	Oedicerotidae	-	*Rostroculodes* sp.
Malacostraca/Amphipoda	Oedicerotidae	-	*Westwoodilla* sp.
Malacostraca/Amphipoda	Pontogeneiidae	-	*Pontoporeia femorata*
Malacostraca/Amphipoda	Tryphosidae	-	*Orchomenella* sp.
Malacostraca/Amphipoda	Tryphosidae	-	Tryphosidae indet.
Malacostraca/Amphipoda	-	-	Amphipoda indet.
Malacostraca/Amphipoda	-	-	Lysianassoidea indet.
Malacostraca/Cumacea	Diastylidae	-	*Brachydiastylis resima*
Malacostraca/Cumacea	Diastylidae	-	Diastylidae indet.
Malacostraca/Cumacea	Diastylidae	-	*Diastylis lucifera*
Malacostraca/Cumacea	Diastylidae	-	*Diastylis scorpioides*
Malacostraca/Cumacea	Diastylidae	-	*Diastylis* sp.
Malacostraca/Cumacea	Lampropidae	-	*Lamprops* sp.
Malacostraca/Cumacea	Leuconidae	-	*Leucon nasica*
Malacostraca/Cumacea	Leuconidae	-	*Leucon nasicoides*
Malacostraca/Cumacea	Leuconidae	-	*Leucon* sp.
Malacostraca/Cumacea	-	-	Cumacea indet.
Malacostraca/Decapoda	Crangonidae	-	Crangonidae indet.
Malacostraca/Isopoda	Gnathiidae	-	*Gnathia* sp.
Malacostraca/Tanaidacea	Akanthophoreidae	-	*Akanthophoreus* sp.
Malacostraca/Tanaidacea	Pseudotanaidae	-	*Pseudotanais* sp.
Ostracoda/Myodocopida	Philomedidae	-	*Philomedes* sp.
Pycnogonida /Pantopoda	Nymphonidae	-	*Nymphon* sp.
Pycnogonida /-	-	-	Pycnogonida indet.
Thecostraca/Balanomorpha	-	-	Balanomorpha indet.

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Taxa Identifications from Samples Collected for DNA Analysis

Bryozoa			
Gymnolaemata/Cheilostomatida	Calloporidae	-	Calloporidae indet.
Gymnolaemata/Cheilostomatida	-	-	Cheilostomatida indet.
Stenolaemata/Cyclostomatida	Crisiidae	-	*Crisia* sp.
Stenolaemata/Cyclostomatida	-	-	Cyclostomatida indet.
-/-	-	-	Bryozoa indet.
Chordata			
Ascidiacea/Stolidobranchia	-	-	Stolidobranchiata indet.
Cnidaria			
Hydrozoa/Anthoathecata	Bougainvilliidae	-	Bougainvilliidae indet.
Hydrozoa/Anthoathecata	-	-	Anthoathecata indet.
Hydrozoa/Leptothecata	-	-	Leptothecata indet.
Hydrozoa/Limnomedusae	Monobrachiidae	-	*Monobrachium parasitum*
Hydrozoa/-	-	-	Hydrozoa indet.
Echinodermata			
Echinoidea/Camarodonta	Strongylocentrotidae	-	*Strongylocentrotus* sp.
Holothuroidea/Apodida	Myriotrochidae	-	*Myriotrochus rinkii*
Holothuroidea/-	-	-	Holothuroidea indet.
Ophiuroidea/Ophiurida	Ophiuridae	Ophiurinae	*Ophiura* sp.
Ophiuroidea/-	-	-	Ophiuroidea indet.
Mollusca			
Bivalvia/Adapedonta	Hiatellidae	-	*Hiatella arctica*
Bivalvia/Cardiida	Cardiidae	Clinocardiinae	*Ciliatocardium ciliatum*
Bivalvia/Cardiida	Cardiidae	Clinocardiinae	*Serripes groenlandicus*
Bivalvia/Cardiida	Tellinidae	Macominae	*Macoma calcarea*
Bivalvia/Cardiida	Tellinidae	Macominae	*Macoma moesta*
Bivalvia/Cardiida	Tellinidae	Macominae	Macominae indet.
Bivalvia/Carditida	Astartidae	-	*Astarte borealis*
Bivalvia/Carditida	Astartidae	-	*Astarte montagui*
Bivalvia/Carditida	Astartidae	-	*Astarte* sp.
Bivalvia/Lucinida	Thyasiridae	-	*Axinopsida* sp.
Bivalvia/Lucinida	Thyasiridae	-	*Thyasira* sp.
Bivalvia/Myida	Myidae	-	*Mya* sp.
Bivalvia/Myida	Myidae	-	*Mya truncata*
Bivalvia/Mytilida	Mytilidae	-	Mytilidae indet.
Bivalvia/Nuculanida	Nuculanidae	Nuculaninae	*Nuculana minuta*
Bivalvia/Nuculanida	Nuculanidae	Nuculaninae	*Nuculana pernula*
Bivalvia/Nuculanida	Nuculanidae	Nuculaninae	*Nuculana* sp.
Bivalvia/Nuculida	Nuculidae	-	*Ennucula tenuis*
Bivalvia/Pectinida	Propeamussiidae	-	*Similipecten greenlandicus*
Bivalvia/-	-	-	Bivalvia indet.
Caudofoveata/Chaetodermatida	Chaetodermatidae	-	*Chaetoderma* sp.
Gastropoda/Cephalaspidea	Cylichnidae	-	Cylichnidae indet.
Gastropoda/Cephalaspidea	Philinidae	-	Philininae indet.
Gastropoda/Littorinimorpha	Capulidae	-	*Ariadnaria borealis*
Gastropoda/Littorinimorpha	Rissoidae	-	*Boreocingula castanea*
Gastropoda/Neogastropoda	Mangeliidae	-	Mangeliidae indet.
Gastropoda/Trochida	Margaritidae	-	*Margarites* sp.
Gastropoda/-	-	-	Gastropoda indet.
Nemertea			
Palaeonemertea/Archinemertea	Cephalothricidae	-	*Cephalothrix* sp.
Pilidiophora/Heteronemertea	Lineidae	-	Lineidae indet.

Notes: taxa identified to the lowest practical taxonomic level; indet.= indeterminate (taxa which could not be identified beyond the taxonomic level listed); sp.=species; cf.=compare with (taxa is an inexact match to the designated taxa.
Taxa in bold indicate taxa flagged or on Program watchlist, to be sent for DNA Barcoding
All taxa cross-referenced with NIS/AIS resources: Fofonoff et al. 2022, ISSG 2022, Rius et al. 2022, Molnar et al. 2008, Casas-Monroy et al. 2014

APPENDIX 8D-2

DNA Sort Lab Data

biologica

Total abundance data in matrix format, including total taxa (species richness) count per sample, total abundance per sample and total density (organsisms/m^2) for Golder Baffinland Iron Mine MEEMP DNA Samples, 2021.

Biologica Sample ID																		
Site											mb21-042-018 SE-2	mb21-042-019 SE-4	mb21-042-020 SW-2	mb21-042-021 SW-6	mb21-042-022 SW-11	mb21-042-023 SW-12	mb21-042-024 SW-13	mb21-042-025 SW-14	mb21-042-026 SNE-7
Date Sampled											14-Aug-21	17-Aug-21	14-Aug-21	12-Aug-21	12-Aug-21	12-Aug-21	12-Aug-21	12-Aug-21	17-Aug-21
									Grand Total	Grand Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
taxcode	grpcode	Phylum	Class	Order	Family	Subfamily	Taxon Name		Unique Taxa	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance	Abundance
ANNE	EURA	Annelida	Polychaeta	Echiuroidea	Polychaeta/Echiuroi	Echiuridae	-	Echiurus echiurus	1	11						11			
ANNE	EURA	Annelida	Polychaeta	Echiuroidea	Polychaeta/Echiuroi	-	-	Echiuroidea indet.		16						16			
ANNE	POER	Annelida	Polychaeta	Eunicida	Polychaeta/Eunicida	Dorvilleidae	-	Ophryotrocha sp.	1	48							48		
ANNE	POER	Annelida	Polychaeta	Eunicida	Polychaeta/Eunicida	Lumbrineridae	-	Lumbrineridae indet.		32									32
ANNE	POER	Annelida	Polychaeta	Eunicida	Polychaeta/Eunicida	Lumbrineridae	-	Scoletoma fragilis	1	356	18	2							336
ANNE	POER	Annelida	Polychaeta	Eunicida	Polychaeta/Eunicida	Lumbrineridae	-	Scoletoma sp.		272	112	128		32					
ANNE	POER	Annelida	Polychaeta	Eunicida	Polychaeta/Eunicida	Onuphidae	Onuphinae	Nothria conchylega	1	69									69
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Hesionidae	-	Hesionidae indet.		65					1		64		
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Hesionidae	-	Nereimyra aphroditoides	1	1,656	161	82	17	17	416	115	592	256	
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Nephtyidae	-	Aglaophamus malmgreni	1	1									1
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Nephtyidae	-	Micronephthys cornuta	1	449	64	48		145	16			16	160
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Nephtyidae	-	Nephtyidae indet.		1				1					
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Nephtyidae	-	Nephtys ciliata	1	1				1					
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Nereididae	Nereidinae	Nereis zonata	1	58	18	21		19					
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Nereididae	-	Nereididae indet.		18	17			1					
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Pholoidae	-	Pholoe longa	1	780	144	86		240	273	21		16	
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Pholoidae	-	Pholoe minuta	1	2,465	1,073	336		640	384			32	
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Pholoidae	-	Pholoe sp.		1,253	48	464	16	84	176		16	209	240
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Phyllodocidae	Eteoninae	Eteone longa complex	1	33						1			32
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Phyllodocidae	Eteoninae	Eteone sp.		163		16		16	16	2	65		48
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Phyllodocidae	Phyllodocinae	Phyllodoce groenlandica	1	18					1	1	16		
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Phyllodocidae	Phyllodocinae	Phyllodoce sp.		1							1		
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Phyllodocidae	-	Phyllodocidae indet.		48			16				32		
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Polynoidae	Polynoinae	Gattyana cirrhosa	1	27	3	24							
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Polynoidae	Polynoinae	Harmothoe imbricata	1	67	1				32	2	16	16	
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Polynoidae	Polynoinae	Harmothoe rarispina	1	1				1					
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Polynoidae	Polynoinae	Harmothoe sp.		97	16	16	16		16	16	1	16	
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Polynoidae	Polynoinae	Polynoinae indet.		33		16					17		
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Sphaerodoridae	-	Sphaerodoropsis biserialis	1	16									16
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Sphaerodoridae	-	Sphaerodoropsis minuta	1	32				32					
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Syllidae	Anoplosyllinae	Streptospinigera niuqtuut	1	16				16					
ANNE	POER	Annelida	Polychaeta	Phyllodocida	Polychaeta/Phyllodo	Syllidae	Exogoninae	Exogone sp.	1	128	96	32							
ANNE	POSE	Annelida	Polychaeta	Sabellida	Polychaeta/Sabellid	Fabriciidae	-	Fabriciidae indet.		16									16
ANNE	POSE	Annelida	Polychaeta	Sabellida	Polychaeta/Sabellid	Fabriciidae	-	Pseudofabricia sp. nr. aberrans	1	16									16
ANNE	POSE	Annelida	Polychaeta	Sabellida	Polychaeta/Sabellid	Oweniidae	-	Galathowenia oculata	1	48									48
ANNE	POSE	Annelida	Polychaeta	Sabellida	Polychaeta/Sabellid	Oweniidae	-	Myriochele sp.	1	32									32
ANNE	POSE	Annelida	Polychaeta	Sabellida	Polychaeta/Sabellid	Sabellidae	Sabellinae	Chone sp.	1	22						6	16		
ANNE	POSE	Annelida	Polychaeta	Sabellida	Polychaeta/Sabellid	Sabellidae	Sabellinae	Euchone incolor	1	144	128						16		
ANNE	POSE	Annelida	Polychaeta	Sabellida	Polychaeta/Sabellid	Sabellidae	Sabellinae	Euchone sp.		12					12				
ANNE	POSE	Annelida	Polychaeta	Sabellida	Polychaeta/Sabellid	Sabellidae	-	Sabellidae indet.		507	1			16	130	45	263	52	
ANNE	POSE	Annelida	Polychaeta	Sabellida	Polychaeta/Sabellid	Serpulidae	Spirorbinae	Bushiella (Jugaria) quadrangularis	1	1				1					
ANNE	POSE	Annelida	Polychaeta	Spionida	Polychaeta/Spionida	Spionidae	-	Dipolydora quadrilobata	1	32	32								
ANNE	POSE	Annelida	Polychaeta	Spionida	Polychaeta/Spionida	Spionidae	-	Dipolydora socialis	1	16	16								
ANNE	POSE	Annelida	Polychaeta	Spionida	Polychaeta/Spionida	Spionidae	-	Marenzelleria sp.	1	150			2			100	48		
ANNE	POSE	Annelida	Polychaeta	Spionida	Polychaeta/Spionida	Spionidae	-	Prionospio sp.	1	64				64					
ANNE	POSE	Annelida	Polychaeta	Spionida	Polychaeta/Spionida	Spionidae	-	Pygospio elegans	1	16	16								
ANNE	POSE	Annelida	Polychaeta	Spionida	Polychaeta/Spionida	Spionidae	-	Scolelepis sp.	1	16							16		
ANNE	POSE	Annelida	Polychaeta	Spionida	Polychaeta/Spionida	Spionidae	-	Spio sp.	1	17		16	1						
ANNE	POSE	Annelida	Polychaeta	Spionida	Polychaeta/Spionida	Spionidae	-	Spionidae indet.		1,361		64	160	32	64	49	896	96	
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Ampharetidae	Ampharetinae	Ampharete sp.	1	16	16								
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Ampharetidae	Ampharetinae	Lysippe labiata	1	49	16		1						32
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Ampharetidae	-	Ampharetidae indet.		85		16			36		16	16	1
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Ampharetidae	-	Amphicteis sp.	1	1		1							
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Cirratulidae	-	Aphelochaeta sp.	1	48	48								
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Cirratulidae	-	Chaetozone pigmentata	1	74	58			16					
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Cirratulidae	-	Chaetozone sp.		806	338	160	66	162	16	16	48		
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Cirratulidae	-	Cirratulidae indet.		756	240	144	208	19	33		48	48	16
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Pectinariidae	-	Cistenides granulata	1	235	19	44		2	51	73	1	45	
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Pectinariidae	-	Cistenides hyperborea	1	36					17	3		16	
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Pectinariidae	-	Cistenides sp.		49			16		1			32	
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Terebellidae	Polycirrinae	Polycirrus sp. complex	1	17					1		16		
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Terebellidae	Terebellinae	Pista maculata	1	65	13	16		16	4		16		

ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Terebellidae	Terebellinae	Amphitrite cirrata	1	1	1									
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Terebellidae	-	Terebellidae indet.		20				1	17		2			
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Trichobranchidae	Trichobranchinae	Terebellides sp.		297	132	35		82	16			16	16	
ANNE	POSE	Annelida	Polychaeta	Terebellida	Polychaeta/Terebelli	Trichobranchidae	Trichobranchinae	Terebellides stroemii	1	1								1		
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Capitellidae	-	Capitella capitata complex	1	112	16			16			80			
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Capitellidae	-	Capitellidae indet.		33						16	16	1		
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Capitellidae	-	Mediomastus sp.	1	272	64	48		16	48	16	64		16	
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Capitellidae	-	Notomastus sp.	1	6									6	
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Cossuridae	-	Cossura longocirrata	1	448	240			208						
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Maldanidae	Euclymeninae	Axiothella sp.	1	1	1									
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Maldanidae	Euclymeninae	Euclymeninae indet.		16					16					
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Maldanidae	Maldaninae	Maldane sarsi	1	124	59	16							49	
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Maldanidae	-	Maldanidae indet.		2									2	
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Opheliidae	Ophelininae	Ophelina sp.	1	64		16		48						
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Orbiniidae	Orbiniinae	Leitoscoloplos sp.	1	48				16					32	
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Orbiniidae	Orbiniinae	Scoloplos armiger	1	2			1		1					
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Orbiniidae	Orbiniinae	Scoloplos sp.		128	80	16		16				16		
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Orbiniidae	-	Orbiniidae indet.		49	32			16			1			
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Paraonidae	-	Aricidea hartmanae	1	48	16		16						16	
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Paraonidae	-	Aricidea minuta	1	96	32	32		32						
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Paraonidae	-	Aricidea sp.		48	32	16								
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Scalibregmatidae	-	Polyphysia baffinensis	1	1				1						
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	Scalibregmatidae	-	Scalibregma inflatum	1	608	208			112	80		96	112		
ANNE	POSE	Annelida	Polychaeta	-	Polychaeta/-	-	-	Polychaete indet.		80			80							
ARTH	CHAR	Arthropoda	Arachnida	-	Arachnida/-	-	-	Acari indet.	1	48						32		16		
ARTH	CRCO	Arthropoda	Hexanauplia	-	Hexanauplia/-	-	-	Copepoda indet.	1	32							16	16		
ARTH	INDI	Arthropoda	Insecta	Diptera	Insecta/Diptera	Chironomidae	-	Chironomidae indet.	1	64					16		48			
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Ampeliscidae	-	Haploops sp.	1	48		48								
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Atylidae	Atylinae	Atylus sp.	1	66	1						65			
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Corophiidae	-	Corophiidae indet.		496		16	16		320		144			
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Corophiidae	-	Crassicorophium bonellii	1	80					48		32			
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Dexaminoidae	Prophliantinae	Guernea nordenskioldi	1	656	304	208		128				16		
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Dulichiidae	-	Dulichiidae indet.	1	48					16		32			
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Oedicerotidae	-	Arrhis sp.	1	32					32					
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Oedicerotidae	-	Monoculopsis sp.	1	160							160			
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Oedicerotidae	-	Oedicerotidae indet.		80	16						16	48		
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Oedicerotidae	-	Paroediceros sp.	1	16							16			
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Oedicerotidae	-	Rostroculodes sp.	1	176	16	32	64	16			48			
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Oedicerotidae	-	Westwoodilla sp.	1	48				48						
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Pontogeneiidae	-	Pontoporeia femorata	1	192	96	96								
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Tryphosidae	-	Orchomenella sp.	1	96				16	16		16	48		
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	Tryphosidae	-	Tryphosidae indet.		48					16	16	16			
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	-	-	Amphipoda indet.		80			32		16		16	16		
ARTH	CRAM	Arthropoda	Malacostraca	Amphipoda	Malacostraca/Amph	-	-	Lysianassoidea indet.		310		50	1		18	80	16	144	1	
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Malacostraca/Cuma	Diastylidae	-	Brachydiastylis resima	1	80		48		16					16	
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Malacostraca/Cuma	Diastylidae	-	Diastylidae indet.		32		16							16	
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Malacostraca/Cuma	Diastylidae	-	Diastylis lucifera	1	32	16	16								
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Malacostraca/Cuma	Diastylidae	-	Diastylis scorpioides	1	48				32	16					
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Malacostraca/Cuma	Diastylidae	-	Diastylis sp.		48		48								
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Malacostraca/Cuma	Lampropidae	-	Lamprops sp.	1	1,040	112	192	48	176	144		288	80		
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Malacostraca/Cuma	Leuconidae	-	Leucon nasica	1	32				32						
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Malacostraca/Cuma	Leuconidae	-	Leucon nasicoides	1	112	16			96						
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Malacostraca/Cuma	Leuconidae	-	Leucon sp.		96				48				32	16	
ARTH	CRCU	Arthropoda	Malacostraca	Cumacea	Malacostraca/Cuma	-	-	Cumacea indet.		32							16	16		
ARTH	CRDE	Arthropoda	Malacostraca	Decapoda	Malacostraca/Decap	Crangonidae	-	Crangonidae indet.	1	1					1					
ARTH	CRIS	Arthropoda	Malacostraca	Isopoda	Malacostraca/Isopo	Gnathiidae	-	Gnathia sp.	1	16									16	
ARTH	CRTA	Arthropoda	Malacostraca	Tanaidacea	Malacostraca/Tanai	Akanthophoreidae	-	Akanthophoreus sp.	1	336	32	96			48	16	48	64	32	
ARTH	CRTA	Arthropoda	Malacostraca	Tanaidacea	Malacostraca/Tanai	Pseudotanaidae	-	Pseudotanais sp.	1	32	32									
ARTH	CROS	Arthropoda	Ostracoda	Myodocopida	Ostracoda/Myodoco	Philomedidae	-	Philomedes sp.	1	1,280	224	624	16	400				16		
ARTH	CHPY	Arthropoda	Pycnogonida	Pantopoda	Pycnogonida /Panto	Nymphonidae	-	Nymphon sp.	1	18		1						16	1	
ARTH	CHPY	Arthropoda	Pycnogonida	-	Pycnogonida /-	-	-	Pycnogonida indet.		16				16						
ARTH	CRCI	Arthropoda	Thecostraca	Balanomorpha	Thecostraca/Balano	-	-	Balanomorpha indet.	1	88		16	56					16		
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Gymnolaemata/Chei	Calloporidae	-	Calloporidae indet.	1	3									3	
MISC	BRYO	Bryozoa	Gymnolaemata	Cheilostomatida	Gymnolaemata/Chei	-	-	Cheilostomatida indet.		32									32	
MISC	BRYO	Bryozoa	Stenolaemata	Cyclostomatida	Stenolaemata/Cyclo	Crisiidae	-	Crisia sp.	1	16									16	
MISC	BRYO	Bryozoa	Stenolaemata	Cyclostomatida	Stenolaemata/Cyclo	-	-	Cyclostomatida indet.		16									16	
MISC	BRYO	Bryozoa	-	-	-/-	-	-	Bryozoa indet.		1									1	
MISC	URAS	Chordata	Ascidiacea	Stolidobranchia	Ascidiacea/Stolidobr	-	-	Stolidobranchia indet.	1	32		16	16							
MISC	CNHY	Cnidaria	Hydrozoa	Anthoathecata	Hydrozoa/Anthoath	Bougainvilliidae	-	Bougainvilliidae indet.	1	38	16				16	6				
MISC	CNHY	Cnidaria	Hydrozoa	Anthoathecata	Hydrozoa/Anthoath	-	-	Anthoathecata indet.		3					3					
MISC	CNHY	Cnidaria	Hydrozoa	Leptothecata	Hydrozoa/Leptothec	-	-	Leptothecata indet.	1	16			16							
MISC	CNHY	Cnidaria	Hydrozoa	Limnomedusae	Hydrozoa/Limnome	Monobrachiidae	-	Monobrachium parasitum	1	17	1			8		2		5	1	
MISC	CNHY	Cnidaria	Hydrozoa	-	Hydrozoa/-	-	-	Hydrozoa indet.		13					2		1	7	3	

ECHI	ECEC	Echinodermata	Echinoidea	Camarodonta	Echinoidea/Camaroc	Strongylocentrotidae	-	Strongylocentrotus sp.	1	2	1			1					
ECHI	ECHO	Echinodermata	Holothuroidea	Apodida	Holothuroidea/Apoc	Myriotrochidae	-	Myriotrochus rinkii	1	54					33	1		20	
ECHI	ECHO	Echinodermata	Holothuroidea	-	Holothuroidea/-	-	-	Holothuroidea indet.		32								32	
ECHI	ECOP	Echinodermata	Ophiuroidea	Ophiurida	Ophiuroidea/Ophiur	Ophiuridae	Ophiurinae	Ophiura sp.	1	14	2	1		2		1	1	1	6
ECHI	ECOP	Echinodermata	Ophiuroidea	-	Ophiuroidea/-	-	-	Ophiuroidea indet.		18		16							2
MOLL	MOBI	Mollusca	Bivalvia	Adapedonta	Bivalvia/Adapedonta	Hiatellidae	-	Hiatella arctica	1	183	49	38	33	43	18			1	1
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Bivalvia/Cardiida	Cardiidae	Clinocardiinae	Ciliatocardium ciliatum	1	6		4		2					
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Bivalvia/Cardiida	Cardiidae	Clinocardiinae	Serripes groenlandicus	1	50		4	32	2	8	1	3		
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Bivalvia/Cardiida	Tellinidae	Macominae	Macoma calcarea	1	172	2			14	26	7	49	61	13
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Bivalvia/Cardiida	Tellinidae	Macominae	Macoma moesta	1	3		1				1		1	
MOLL	MOBI	Mollusca	Bivalvia	Cardiida	Bivalvia/Cardiida	Tellinidae	Macominae	Macominae indet.		69	1	2						18	48
MOLL	MOBI	Mollusca	Bivalvia	Carditida	Bivalvia/Carditida	Astartidae	-	Astarte borealis	1	113	53	35		25					
MOLL	MOBI	Mollusca	Bivalvia	Carditida	Bivalvia/Carditida	Astartidae	-	Astarte montagui	1	291	160	127		3					1
MOLL	MOBI	Mollusca	Bivalvia	Carditida	Bivalvia/Carditida	Astartidae	-	Astarte sp.		204	86	102							16
MOLL	MOBI	Mollusca	Bivalvia	Lucinida	Bivalvia/Lucinida	Thyasiridae	-	Axinopsida sp.	1	112								112	
MOLL	MOBI	Mollusca	Bivalvia	Lucinida	Bivalvia/Lucinida	Thyasiridae	-	Thyasira sp.	1	48	32			16					
MOLL	MOBI	Mollusca	Bivalvia	Myida	Bivalvia/Myida	Myidae	-	Mya sp.		128	32	32		16	48				
MOLL	MOBI	Mollusca	Bivalvia	Myida	Bivalvia/Myida	Myidae	-	Mya truncata	1	62	12	42	1	5	2				
MOLL	MOBI	Mollusca	Bivalvia	Mytilida	Bivalvia/Mytilida	Mytilidae	-	Mytilidae indet.	1	16				16					
MOLL	MOBI	Mollusca	Bivalvia	Nuculanida	Bivalvia/Nuculanida	Nuculanidae	Nuculaninae	Nuculana minuta	1	22	16	3		2				1	
MOLL	MOBI	Mollusca	Bivalvia	Nuculanida	Bivalvia/Nuculanida	Nuculanidae	Nuculaninae	Nuculana pernula	1	34		16		17					1
MOLL	MOBI	Mollusca	Bivalvia	Nuculanida	Bivalvia/Nuculanida	Nuculanidae	Nuculaninae	Nuculana sp.		112	48	32		32					
MOLL	MOBI	Mollusca	Bivalvia	Nuculida	Bivalvia/Nuculida	Nuculidae	-	Ennucula tenuis	1	102		48		18				2	34
MOLL	MOBI	Mollusca	Bivalvia	Pectinida	Bivalvia/Pectinida	Propeamussiidae	-	Similipecten greenlandicus	1	14	5	5	2	2					
MOLL	MOBI	Mollusca	Bivalvia	-	Bivalvia/-	-	-	Bivalvia indet.		240	64	32		32	16	16		80	
MOLL	MOAP	Mollusca	Caudofoveata	Chaetodermatida	Caudofoveata/Chaet	Chaetodermatidae	-	Chaetoderma sp.	1	17									17
MOLL	MOGA	Mollusca	Gastropoda	Cephalaspidea	Gastropoda/Cephala	Cylichnidae	-	Cylichnidae indet.	1	80	16	16		32				16	
MOLL	MOGA	Mollusca	Gastropoda	Cephalaspidea	Gastropoda/Cephala	Philinidae	-	Philininae indet.	1	16	16								
MOLL	MOGA	Mollusca	Gastropoda	Littorinimorpha	Gastropoda/Littorini	Capulidae	-	Ariadnaria borealis	1	3	1							2	
MOLL	MOGA	Mollusca	Gastropoda	Littorinimorpha	Gastropoda/Littorini	Rissoidae	-	Boreocingula castanea	1	16	16								
MOLL	MOGA	Mollusca	Gastropoda	Neogastropoda	Gastropoda/Neogas	Mangeliidae	-	Mangeliidae indet.	1	50		1		16			17	16	
MOLL	MOGA	Mollusca	Gastropoda	Trochida	Gastropoda/Trochid	Margaritidae	-	Margarites sp.	1	16				16					
MOLL	MOGA	Mollusca	Gastropoda	-	Gastropoda/-	-	-	Gastropoda indet.		16		16							
MISC	NTEA	Nemertea	Palaeonemertea	Archinemertea	Palaeonemertea/Arc	Cephalothricidae	-	Cephalothrix sp.	1	48	16			32					
MISC	NTEA	Nemertea	Pilidiophora	Heteronemertea	Pilidiophora/Hetero	Lineidae	-	Lineidae indet.	1	49	32			16					1
								Total Abundance		**24,157**	**5,167**	**4,007**	**949**	**3,529**	**2,753**	**688**	**3,591**	**1,931**	**1,542**
								Total Unique Taxa (Species Richness)	**118**		**58**	**49**	**23**	**59**	**35**	**22**	**35**	**37**	**34**
								Grab Sampler		**Van Veen**	**Van Veen**	**Van Veen**	**Van Veen**	**Van Veen**	**Van Veen**	**Van Veen**	**Van Veen**	**Van Veen**	**Van Veen**
								# of Composite Grabs		**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**
								Total Density (Organisms/m^2)		**80,523**	**17,223**	**13,357**	**3,163**	**11,763**	**9,177**	**2,293**	**11,970**	**6,437**	**5,140**
Incidental Taxa:																			
MEMO	MEMO	Arthropoda	Hexanauplia					Copepoda indet. (parasitic)		32					32				

APPENDIX 8D-3

DNA Sort Lab Methods

Marine Benthic Enumeration and Identification Methods
Client: Golder
Project: Baffinland Iron Mine MEEMP, 2021
Sample Type: DNA
Protocol: EEM

Sample Inventory

Sample arrival: 15-Sept-21
Number of samples: 9
Number of jars: 25
Screen size: 500 µm and 1.0 cm
Biologica project number: mb21-042

The chain of custody documents were checked and approved with the client. Samples arrived preserved in DNA grade Ethanol (95%). Samples were stored in a freezer at Biologica. Each sample was provided a unique identification number and placed in the queue for analysis.

Table 1. Summary of benthic samples processed for Golder Baffinland Iron Mine MEEMP DNA Samples, 2021.

Site	Date Sampled	Biologica Sample ID	# of Jars	Field Screen	Field Split	Final Split	Organisms Counted
SE-2	14-Aug-21	mb21-042-018	1	500 µm	1/4	1/16	311
			2	1.0 cm	Whole	Whole	191
SE-4	17-Aug-21	mb21-042-019	1	500 µm	1/4	1/16	239
			2	1.0 cm	Whole	Whole	183
SW-2	14-Aug-21	mb21-042-020	2	500 µm	1/4	1/16	58
			1	1.0 cm	Whole	Whole	21
SW-6	12-Aug-21	mb21-042-021	1	500 µm	1/4	1/16	212
			2	1.0 cm	Whole	Whole	137
SW-11	12-Aug-21	mb21-042-022	1	500 µm	1/4	1/16	137
			1	1.0 cm	Whole	1/16	31
				1.0 cm	Whole	Whole	65
SW-12	12-Aug-21	mb21-042-023	2	500 µm	1/4	1/16	26
			2	1.0 cm	Whole	1/16	7
				1.0 cm	Whole	Whole	160
SW-13	12-Aug-21	mb21-042-024	1	500 µm	1/4	1/16	125
			2	1.0 cm	Whole	1/16	97
				1.0 cm	Whole	Whole	39
SW-14	12-Aug-21	mb21-042-025	1	500 µm	1/4	1/16	88
			1	1.0 cm	Whole	1/16	29
				1.0 cm	Whole	Whole	59
SNE-7	17-Aug-21	mb21-042-026	1	500 µm	1/4	1/16	91
			1	1.0 cm	Whole	Whole	86

Sample Processing

Sorting and Subsampling:

All samples were sorted using dissecting microscopes at 10–40x magnification by trained personnel. Microscopic sorting is the only way to ensure >90% of organisms are removed from the debris, which is required by EEM (Environment Canada; Environmental Effects Monitoring) guidelines for marine benthic analyses. To minimize potential sorter bias, samples were distributed among technicians such that no one person sorted all the replicates of a given sample.

Due to historically large volumes and high abundances in the samples, samples were fractioned in the field into a 1.0 cm macro fraction and 500 µm fine fraction. This strategy was developed to maximize the detection of large and rare individuals in the macro fraction while accurately enumerating smaller organisms in the fine fraction. The macro 1.0 cm fraction was analyzed whole, with all large organisms (>1.0 cm) removed from the sample, as was done for the formalin preserved benthic samples. In addition, all large debris in this fraction were checked microscopically, including rocks and other large debris to ensure encrusting organisms were accurately enumerated. For four samples, SW-11, -12, -13, and -14 the 1.0 cm fraction contained a large volume of dense organic material. To be accurately enumerate and capture the diversity of the smaller taxa the dense organic material from the 1.0 cm fraction was subsampled. The organic material was first thoroughly checked for large organisms >1.0 cm and then the material was spread on a Caton tray (Caton, 1991) and subsampled to a 1/16 split.

The 500 µm fraction was split in the field to 1/4. Biologica subsequently split this fraction by a second 1/4, for a final 1/16 split. Subsampling was done with a Caton tray (Caton, 1991). The sample was spread evenly over a Caton grid, and sequential random quadrats were selected and sorted until the minimum 1/4 split was reached.

Sub-sampling accuracy was assessed by sorting the remaining 500 µm fraction sample for 10% of all sub-sampled samples (one sample) and comparing the fractions to one another. Refer to Table 2 for sub-sampling accuracy results.

Table 2. Results of subsampling accuracy for Golder Baffinland Iron Mine MEEMP DNA Samples, 2021.

Site	Biologica Sample ID	Sub-sampling Accuracy
SE-2	mb21-042-018	
SE-4	mb21-042-019	
SW-2	mb21-042-020	
SW-6	mb21-042-021	
SW-11	mb21-042-022	
SW-12	mb21-042-023	
SW-13	mb21-042-024	74.40%
SW-14	mb21-042-025	
SNE-7	mb21-042-026	

Identification and Invasive Species Detection:

All organisms were identified using a combination of dissecting (10–40x) and compound microscopes (100–1000x) and standard taxonomic keys (see methodological and taxonomic references) to the lowest practicable level (as preservation in ethanol allows). All specimens were archived in air-tight glass vials with 95% ethanol and stored in the freezer. Taxonomic data were recorded in Biologica's custom database. One new taxa was recorded that had not been previously identified in the historical benthic data, *Cistenides hyperborea.* All specimens were referenced for DNA analysis and/or verification.

Data Management and Analysis

All data were recorded in Biologica's custom database. Total abundances were extrapolated for samples split in the field to represent the abundance from the whole sample. Organism densities were calculated by dividing the total organism abundance (extrapolated if the sample was split) using the area of a Van Veen grab (0.1 m^2), with three composite Van Veen grabs (3 x 0.1m^2) for each sample.

Results were provided to the Golder project manager in Excel spreadsheets via email.

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APPENDIX 8D-4

DNA Macroflora Methods and Results

CANADIAN CENTRE FOR DNA BARCODING
DNA Testing Laboratory Report

FORENSIC CASE INFORMATION

File Number: BIO-22-040_Biologica Environmental Services_Tara Macdonald_2022-03-09
Accession Number: BIO-22-040

Client Name: Tara Macdonald; President/CEO
Client Address: Biologica Environmental Services, Ltd.
488-F Bay Street, Victoria BC, V8T 5H2
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Contact Name: Tara Macdonald (tara@biologica.ca)

ITEMS

Description: Eight specimens of invertebrate organisms with putative taxonomy were submitted for species verification with DNA barcoding using Sanger sequencing

Sample ID provided	Sample ID	Process ID	Putative taxon
21-042-026	CCBDFR0734	ABCBF758-22	*Pseudofabricia* sp. nr. *aberrans*
20-045-250-A	CCBDFR0735	ABCBF759-22	*Pseudofabricia* sp. nr. *aberrans*
20-045-250-B	CCBDFR0736	ABCBF760-22	*Pseudofabricia* sp. nr. *aberrans*
21-042-024-A	CCBDFR0737	ABCBF761-22	*Crassicorophium bonelli*
21-042-024-B	CCBDFR0738	ABCBF762-22	*Crassicorophium bonelli*
21-042-022-A	CCBDFR0739	ABCBF763-22	*Crassicorophium bonelli*
21-042-022-B	CCBDFR0740	ABCBF764-22	*Crassicorophium bonelli*
21-042-022-C	CCBDFR0741	ABCBF765-22	*Crassicorophium bonelli*

Dates Received: March-09, 2022
Received From: Maria Kuzmina

Dates of Analysis: March 16 – 25, 2022
Collector/Collection Site: Nguyen NguyenTX./ Canadian Centre for DNA Barcoding, Biodiversity of Ontario, University of Guelph, 50 Stone Road East, Guelph

METHODS

To ascertain the identity of the species from the submitted samples, the whole specimens CCDBFR0721 - CCDBFR0733 were lysed. Total genomic DNA was extracted using validated spin columns. The target genetic marker (DNA barcode region of the mitochondrial cytochrome *c* oxidase subunit I gene) was amplified using polymerase chain reaction (PCR) employing the primers suitable for Arthropoda (*C-LepFoIF/C-LepFoIR*) for putative taxon *Crassicorophium bonelli* and primers suitable for Annelida (*polyLCO/polyHCO*) for putative taxon *Pseudofabricia* sp. nr*. Aberrans* samples. Cycle sequencing was performed using a standardized commercially available BigDye Terminator v3.1 kit. Sequencing reactions were analyzed by high-voltage capillary electrophoresis on an automated ABI 3730xL DNA Analyzer. Recovered DNA sequences were compared against the Barcode of Life Data System (BOLD) database accessible at http://www.boldsystems.org/.

IMAGING

All items were photographed in the Photography Lab Area by Nguyen NguyenT.X., using a Canon ELPH 300 HS, 12.1 megapixels. Pictures were uploaded to the BOLD website into the secure project called "[ABCBF] – Forensic sampling".

INTERPRETATION

Bidirectional forward and reverse sequences were generated from all samples. Resulting trace files were assembled into contigs, and their consensus sequences were manually edited in CodonCode Aligner (version 4.1.1.) software. The resulting COI barcode sequences were compared against the publicly available records in Barcode of Life Database (BOLD) and National Centre for Biotechnology Information (NCBI). Based on the percentage of nucleotide sequence divergence (number of nucleotide substitutions) between sequence from test sample and reference DNA barcode, the closest match was used to infer species identity of the DNA contributor in the corresponding test sample (BLAST algorithm). Images, primers, sequences, and their associated trace files with quality scores were uploaded to the secure BOLD project called "[ABCBF] – Forensic sampling".

SUMMARY OF RESULTS

The sequences for the samples 21-042-026, 20-045-250-A, and 20-045-250-B showed no variation within the amplified COI region (~580 base pairs). The closest match with 79.23% similarity to *Fabricia stellaris* (class Polychaeta, phylum Annelida) was found in BOLD (Figure 1). The closest match with 76.96% similarity to *Polychaeta sp.* (class Polychaeta, phylum Annelida) was found in NCBI (accession numbers MN684125, MN684053).

The sequences for the samples 21-042-024-A, 21-042-024-B, 21-042-022-A, 21-042-022-B, 21-042-022-C showed closest match with 100% similarity to order Amphipoda (class Malacostraca, phylum Arthropoda) was found in BOLD (http://www.barcodinglife.org/index.php/Public_BarcodeCluster?clusteruri=BOLD:AEB7517) (Figure 2). The closest match with 83.76% similarity to *Corophium sp.* (class Malacostraca, phylum Arthropoda) was found in NCBI (accession number MG313289).

CONCLUSIONS

The tested samples (CCBDFR0734- CCBDFR0741) showed no significant similarity on species level with the records in the publicly available sequencing databases (BOLD and NCBI). The closest match for the samples CCBDFR0734, CCBDFR0735, and CCBDFR0736 is class Polychaeta, which corresponds with the putative identification of these samples. The closest match for the samples CCBDFR0737, CCBDFR0738, CCBDFR0739, CCBDFR0740, and CCBDFR0741 is order Amphipoda, which corresponds with the putative identification of these samples.

RESULTS REPORTED BY:

Nguyen NguyenTX., MSc; Wildlife Forensic Technician

RESULTS REVIEWED BY:

Maria Kuzmina, PhD; Plant Lead

Evgeny V. Zakharov, PhD; Director, CCDB

FIGURES

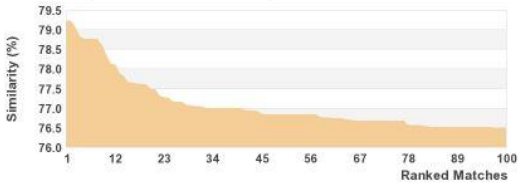
Query: 21-042-026_stock_
Top Hit: No match

Search Result:

Request Type: COI FULL DATABASE (includes records without species designation)

TREE BASED IDENTIFICATION

Similarity scores of the top 100 matches



Top 20 Matches

Display option: Top 20

Phylum	Class	Order	Family	Genus	Species	Subspecies	Similarity (%)	Status
Annelida	Polychaeta	Sabellida	Fabriciidae	*Fabricia*	*stellaris*		79.23	Private
Annelida	Polychaeta	Sabellida	Fabriciidae	*Fabricia*	*stellaris*		79.23	Early-Release
Annelida	Polychaeta	Sabellida	Fabriciidae	*Fabricia*			79.07	Private
Annelida	Polychaeta	Sabellida	Fabriciidae	*Fabricia*	*stellaris*		78.83	Private
Annelida	Polychaeta	Canalipalpata	Protodriloidiidae				78.75	Published
Annelida	Polychaeta	Canalipalpata	Protodriloidiidae				78.75	Published
Annelida	Polychaeta	Canalipalpata	Protodriloidiidae				78.75	Published
Annelida	Polychaeta	Canalipalpata	Protodriloidiidae				78.75	Published
Annelida	Polychaeta	Sabellida	Fabriciidae	*Fabricia*	*stellaris*		78.59	Private
Annelida	Clitellata	Haplotaxida	Rhinodrilidae	*Pontoscolex*	*corethrurus*		78.32	Published
Annelida	Polychaeta	Sabellida	Fabriciidae	*Fabricia*	*sp.*		78.12	Private
Annelida	Clitellata	Haplotaxida	Rhinodrilidae	*Pontoscolex*	*corethrurus*		78.1	Published
Annelida	Clitellata	Haplotaxida	Rhinodrilidae	*Pontoscolex*	*corethrurus*		77.88	Published
Annelida	Polychaeta						77.8	Published
Annelida	Clitellata	Haplotaxida	Lumbricidae				77.66	Early-Release
Annelida	Polychaeta	Spionida	Spionidae				77.64	Private
Annelida	Clitellata	Haplotaxida	Lumbricidae	*Aporrectodea*	*caliginosa*		77.63	Private

Figure 1 – Species identification match percentage on BOLD for sample 21-042-026 (CCDBFR0734).

Query: 21-042-022A_1in10_
Top Hit: Arthropoda Malacostraca - Amphipoda (100%)

Search Result:

Request Type: COI FULL DATABASE (includes records without species designation)

TREE BASED IDENTIFICATION

Similarity scores of the top 100 matches

Top 20 Matches

Display option: Top 20

Phylum	Class	Order	Family	Genus	Species	Subspecies	Similarity (%)	Status
Arthropoda	Malacostraca	Amphipoda					100	Published
Arthropoda	Malacostraca	Amphipoda					99.83	Published
Arthropoda	Malacostraca	Amphipoda					99.65	Published
Arthropoda	Malacostraca	Amphipoda					99.65	Published
Arthropoda	Malacostraca	Amphipoda					99.65	Published
Arthropoda	Malacostraca	Amphipoda	Corophiidae	*Corophium*			83.59	Published
Arthropoda	Malacostraca	Amphipoda	Corophiidae				83.07	Published
Arthropoda	Malacostraca	Amphipoda	Corophiidae	*Monocorophium*	*sextonae*		83.07	Published
Arthropoda	Malacostraca	Amphipoda	Corophiidae	*Monocorophium*	*sextonae*		83.07	Published
Arthropoda	Malacostraca	Amphipoda	Corophiidae	*Monocorophium*	*sextonae*		83.07	Published
Arthropoda	Malacostraca	Amphipoda	Corophiidae	*Monocorophium*	*sextonae*		83.07	Published
Arthropoda	Malacostraca	Amphipoda	Corophiidae	*Monocorophium*	*sextonae*		83.07	Published
Arthropoda	Malacostraca	Amphipoda	Corophiidae	*Corophium*			82.88	Published
Arthropoda	Malacostraca	Amphipoda	Corophiidae	*Corophium*			82.73	Published
Arthropoda	Malacostraca	Amphipoda	Corophiidae	*Corophium*			82.7	Published

Figure 2 – Species identification match percentage on BOLD for sample 21-042-022A (CCDBFR0739)

BOLD TaxonID Tree

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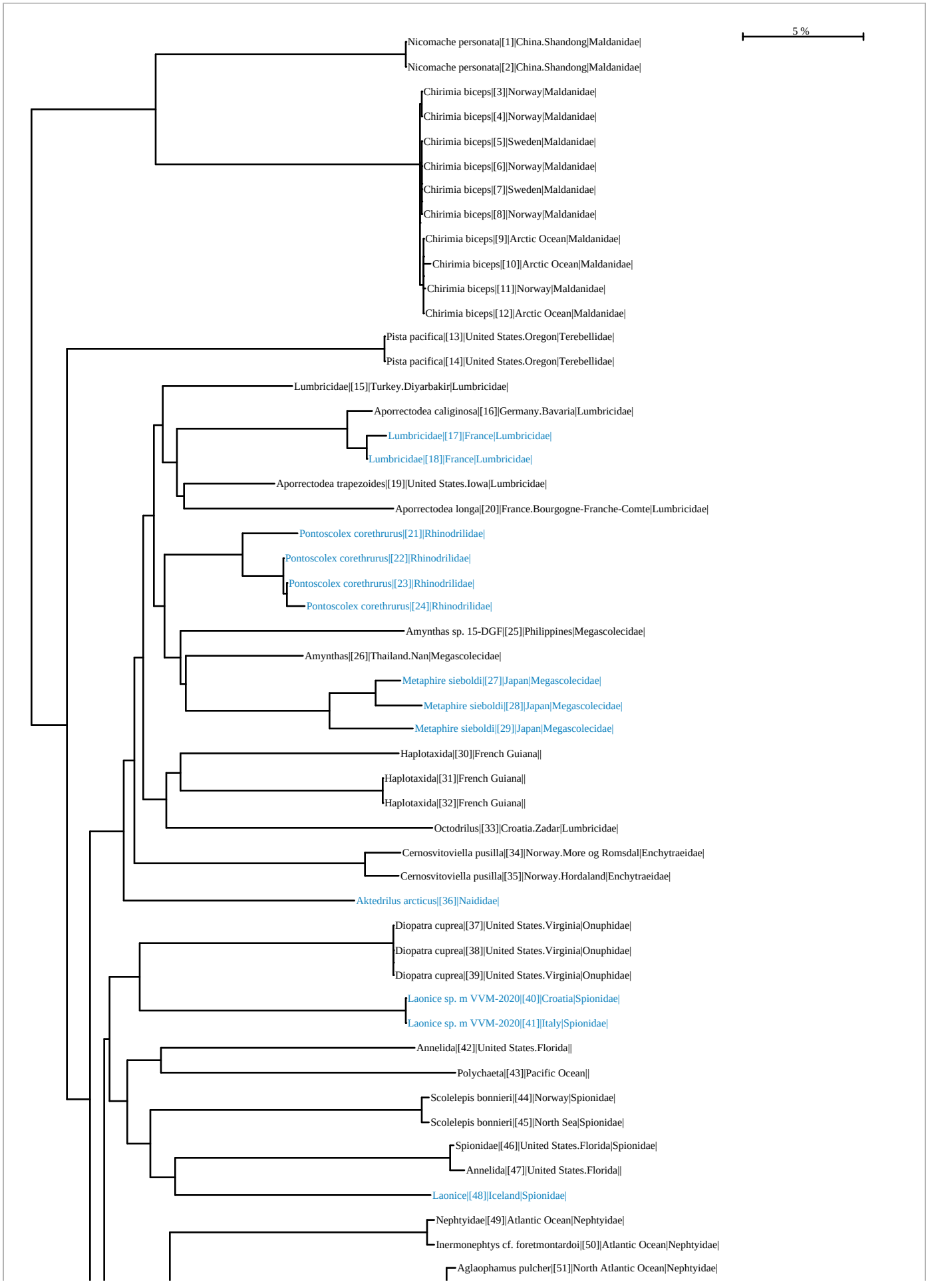
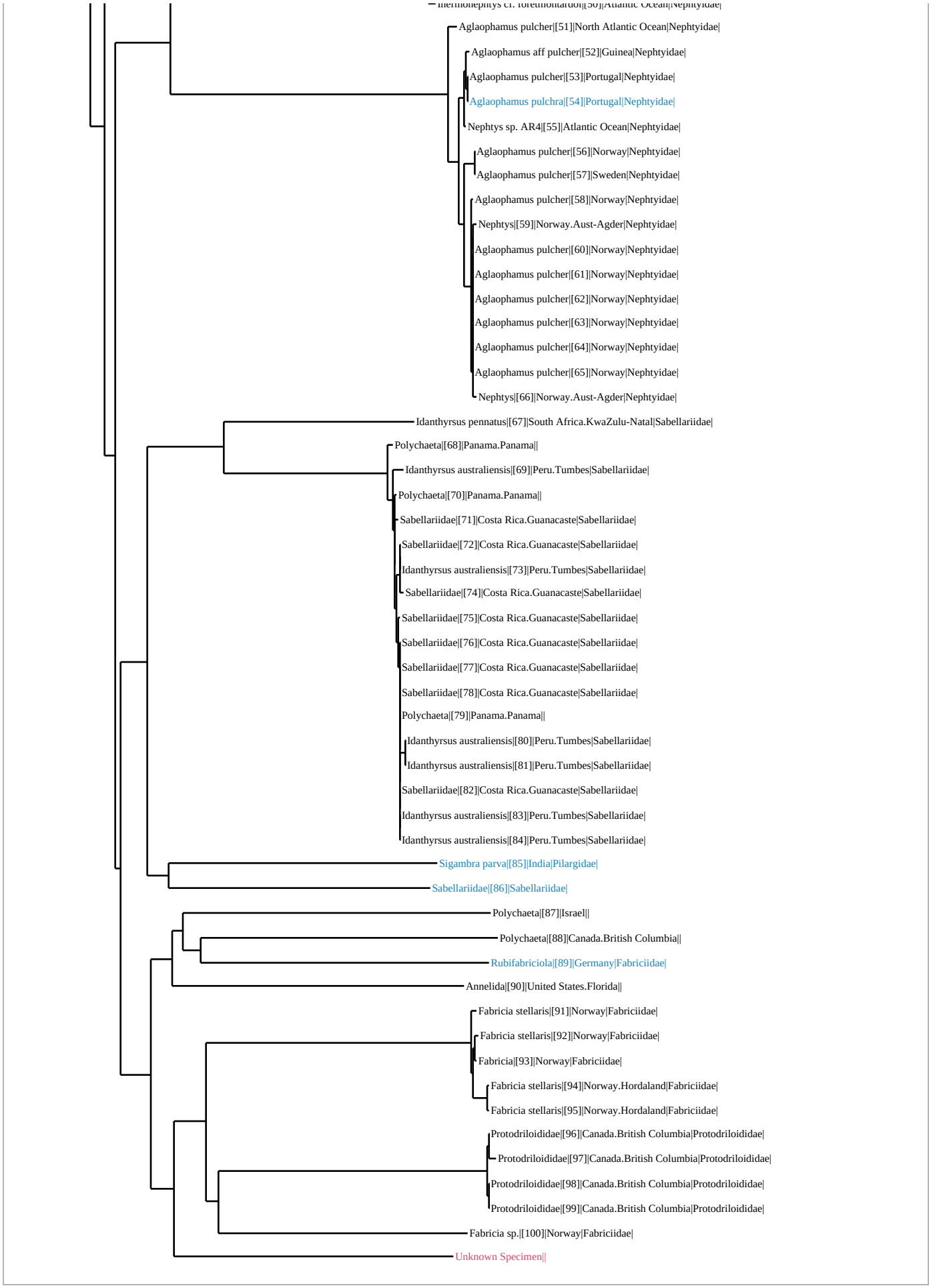
Date	: 9-June-2022
Data Type	: Nucleotide
Distance Model	: Kimura 2 Parameter
Marker	: COI-5P
Codon Positions	: 1st, 2nd, 3rd
Labels	: Extra Info, Country & Province, Family
Filters	: Length > 200
Attachment	: Photographs & Spreadsheet
Sequence Count	: 101
Species count	: 24
Genus count	: 20
Family count	: 14
Unidentified	: 38


5 %
Nicomache personata|[1]|China.Shandong|Maldanidae|
Nicomache personata|[2]|China.Shandong|Maldanidae|
Chirimia biceps|[3]|Norway|Maldanidae|
Chirimia biceps|[4]|Norway|Maldanidae|
Chirimia biceps|[5]|Sweden|Maldanidae|
Chirimia biceps|[6]|Norway|Maldanidae|
Chirimia biceps|[7]|Sweden|Maldanidae|
Chirimia biceps|[8]|Norway|Maldanidae|
Chirimia biceps|[9]|Arctic Ocean|Maldanidae|
Chirimia biceps|[10]|Arctic Ocean|Maldanidae|
Chirimia biceps|[11]|Norway|Maldanidae|
Chirimia biceps|[12]|Arctic Ocean|Maldanidae|
Pista pacifica|[13]|United States.Oregon|Terebellidae|
Pista pacifica|[14]|United States.Oregon|Terebellidae|
Lumbricidae|[15]|Turkey.Diyarbakir|Lumbricidae|
Aporrectodea caliginosa|[16]|Germany.Bavaria|Lumbricidae|
Lumbricidae|[17]|France|Lumbricidae|
Lumbricidae|[18]|France|Lumbricidae|
Aporrectodea trapezoides|[19]|United States.Iowa|Lumbricidae|
Aporrectodea longa|[20]|France.Bourgogne-Franche-Comte|Lumbricidae|
Pontoscolex corethrurus|[21]|Rhinodrilidae|
Pontoscolex corethrurus|[22]|Rhinodrilidae|
Pontoscolex corethrurus|[23]|Rhinodrilidae|
Pontoscolex corethrurus|[24]|Rhinodrilidae|
Amynthas sp. 15-DGF|[25]|Philippines|Megascolecidae|
Amynthas|[26]|Thailand.Nan|Megascolecidae|
Metaphire sieboldi|[27]|Japan|Megascolecidae|
Metaphire sieboldi|[28]|Japan|Megascolecidae|
Metaphire sieboldi|[29]|Japan|Megascolecidae|
Haplotaxida|[30]|French Guiana||
Haplotaxida|[31]|French Guiana||
Haplotaxida|[32]|French Guiana||
Octodrilus|[33]|Croatia.Zadar|Lumbricidae|
Cernosvitoviella pusilla|[34]|Norway.More og Romsdal|Enchytraeidae|
Cernosvitoviella pusilla|[35]|Norway.Hordaland|Enchytraeidae|
Aktedrilus arcticus|[36]|Naididae|
Diopatra cuprea|[37]|United States.Virginia|Onuphidae|
Diopatra cuprea|[38]|United States.Virginia|Onuphidae|
Diopatra cuprea|[39]|United States.Virginia|Onuphidae|
Laonice sp. m VVM-2020|[40]|Croatia|Spionidae|
Laonice sp. m VVM-2020|[41]|Italy|Spionidae|
Annelida|[42]|United States.Florida||
Polychaeta|[43]|Pacific Ocean||
Scolelepis bonnieri|[44]|Norway|Spionidae|
Scolelepis bonnieri|[45]|North Sea|Spionidae|
Spionidae|[46]|United States.Florida|Spionidae|
Annelida|[47]|United States.Florida||
Laonice|[48]|Iceland|Spionidae|
Nephtyidae|[49]|Atlantic Ocean|Nephtyidae|
Inermonephtys cf. foretmontardoi|[50]|Atlantic Ocean|Nephtyidae|
Aglaophamus pulcher|[51]|North Atlantic Ocean|Nephtyidae|


Aglaophamus pulcher|[51]|North Atlantic Ocean|Nephtyidae|
Aglaophamus aff pulcher|[52]|Guinea|Nephtyidae|
Aglaophamus pulcher|[53]|Portugal|Nephtyidae|
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Aglaophamus pulcher|[56]|Norway|Nephtyidae|
Aglaophamus pulcher|[57]|Sweden|Nephtyidae|
Aglaophamus pulcher|[58]|Norway|Nephtyidae|
Nephtys|[59]|Norway.Aust-Agder|Nephtyidae|
Aglaophamus pulcher|[60]|Norway|Nephtyidae|
Aglaophamus pulcher|[61]|Norway|Nephtyidae|
Aglaophamus pulcher|[62]|Norway|Nephtyidae|
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Aglaophamus pulcher|[64]|Norway|Nephtyidae|
Aglaophamus pulcher|[65]|Norway|Nephtyidae|
Nephtys|[66]|Norway.Aust-Agder|Nephtyidae|
Idanthyrsus pennatus|[67]|South Africa.KwaZulu-Natal|Sabellariidae|
Polychaeta|[68]|Panama.Panama||
Idanthyrsus australiensis|[69]|Peru.Tumbes|Sabellariidae|
Polychaeta|[70]|Panama.Panama||
Sabellariidae|[71]|Costa Rica.Guanacaste|Sabellariidae|
Sabellariidae|[72]|Costa Rica.Guanacaste|Sabellariidae|
Idanthyrsus australiensis|[73]|Peru.Tumbes|Sabellariidae|
Sabellariidae|[74]|Costa Rica.Guanacaste|Sabellariidae|
Sabellariidae|[75]|Costa Rica.Guanacaste|Sabellariidae|
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Sabellariidae|[77]|Costa Rica.Guanacaste|Sabellariidae|
Sabellariidae|[78]|Costa Rica.Guanacaste|Sabellariidae|
Polychaeta|[79]|Panama.Panama||
Idanthyrsus australiensis|[80]|Peru.Tumbes|Sabellariidae|
Idanthyrsus australiensis|[81]|Peru.Tumbes|Sabellariidae|
Sabellariidae|[82]|Costa Rica.Guanacaste|Sabellariidae|
Idanthyrsus australiensis|[83]|Peru.Tumbes|Sabellariidae|
Idanthyrsus australiensis|[84]|Peru.Tumbes|Sabellariidae|
Sigambra parva|[85]|India|Pilargidae|
Sabellariidae|[86]|Sabellariidae|
Polychaeta|[87]|Israel||
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Fabricia stellaris|[94]|Norway.Hordaland|Fabriciidae|
Fabricia stellaris|[95]|Norway.Hordaland|Fabriciidae|
Protodriloididae|[96]|Canada.British Columbia|Protodriloididae|
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Protodriloididae|[98]|Canada.British Columbia|Protodriloididae|
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Unknown Specimen||

BOLD TaxonID Tree

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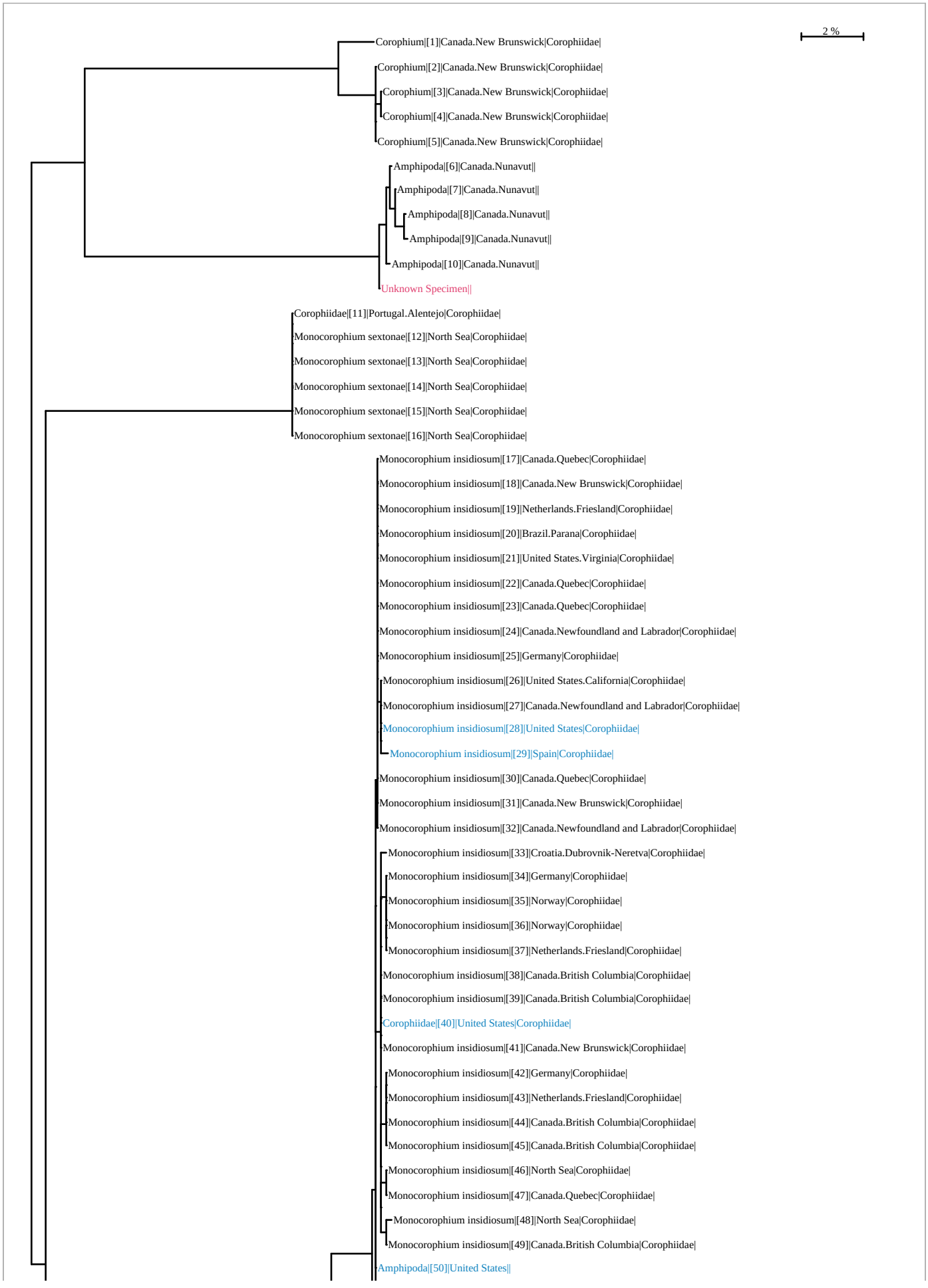
Codon Positions	: 1st, 2nd, 3rd
Labels	: Extra Info, Country & Province, Family
Filters	: Length > 200
Attachment	: Photographs & Spreadsheet
Sequence Count	: 101
Species count	: 7
Genus count	: 5
Family count	: 2
Unidentified	: 16


2 %
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Corophium|[2]|Canada.New Brunswick|Corophiidae|
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Monocorophium insidiosum|[25]|Germany|Corophiidae|
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Monocorophium insidiosum|[39]|Canada.British Columbia|Corophiidae|
Corophiidae|[40]|United States|Corophiidae|
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Monocorophium insidiosum|[48]|North Sea|Corophiidae|
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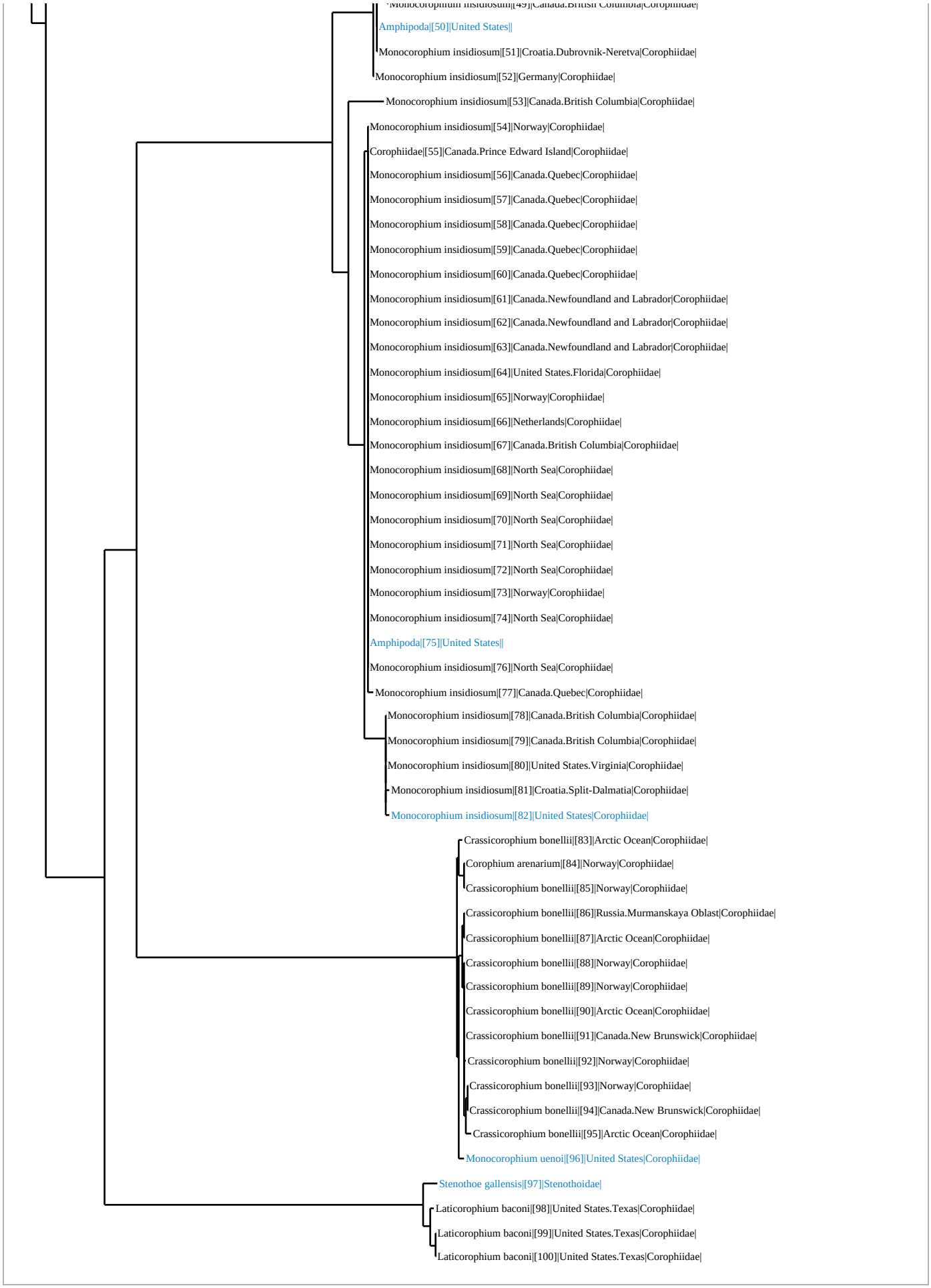
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Monocorophium insidiosum|[54]|Norway|Corophiidae|
Corophiidae|[55]|Canada.Prince Edward Island|Corophiidae|
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Monocorophium insidiosum|[57]|Canada.Quebec|Corophiidae|
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Monocorophium insidiosum|[61]|Canada.Newfoundland and Labrador|Corophiidae|
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Monocorophium insidiosum|[64]|United States.Florida|Corophiidae|
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Monocorophium insidiosum|[67]|Canada.British Columbia|Corophiidae|
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Monocorophium insidiosum|[71]|North Sea|Corophiidae|
Monocorophium insidiosum|[72]|North Sea|Corophiidae|
Monocorophium insidiosum|[73]|Norway|Corophiidae|
Monocorophium insidiosum|[74]|North Sea|Corophiidae|
Amphipoda|[75]|United States||
Monocorophium insidiosum|[76]|North Sea|Corophiidae|
Monocorophium insidiosum|[77]|Canada.Quebec|Corophiidae|
Monocorophium insidiosum|[78]|Canada.British Columbia|Corophiidae|
Monocorophium insidiosum|[79]|Canada.British Columbia|Corophiidae|
Monocorophium insidiosum|[80]|United States.Virginia|Corophiidae|
Monocorophium insidiosum|[81]|Croatia.Split-Dalmatia|Corophiidae|
Monocorophium insidiosum|[82]|United States|Corophiidae|
Crassicorophium bonellii|[83]|Arctic Ocean|Corophiidae|
Corophium arenarium|[84]|Norway|Corophiidae|
Crassicorophium bonellii|[85]|Norway|Corophiidae|
Crassicorophium bonellii|[86]|Russia.Murmanskaya Oblast|Corophiidae|
Crassicorophium bonellii|[87]|Arctic Ocean|Corophiidae|
Crassicorophium bonellii|[88]|Norway|Corophiidae|
Crassicorophium bonellii|[89]|Norway|Corophiidae|
Crassicorophium bonellii|[90]|Arctic Ocean|Corophiidae|
Crassicorophium bonellii|[91]|Canada.New Brunswick|Corophiidae|
Crassicorophium bonellii|[92]|Norway|Corophiidae|
Crassicorophium bonellii|[93]|Norway|Corophiidae|
Crassicorophium bonellii|[94]|Canada.New Brunswick|Corophiidae|
Crassicorophium bonellii|[95]|Arctic Ocean|Corophiidae|
Monocorophium uenoi|[96]|United States|Corophiidae|
Stenothoe gallensis|[97]|Stenothoidae|
Laticorophium baconi|[98]|United States.Texas|Corophiidae|
Laticorophium baconi|[99]|United States.Texas|Corophiidae|
Laticorophium baconi|[100]|United States.Texas|Corophiidae|

Ethanol specimens for sequencing

Q1 *Desmarestia aculeata* or *Dictyosiphon foeniculaceus* (BROWN)

Q3 cf. *Coelocladia arctica* (formerly ID'd as cf. *Trachynema groenlandicum*) (BROWN)

Q4 cf. *Dictyosiphon foeniculaceus* (BROWN)

Q5 cf. *Coelocladia arctica* (see above; BROWN)

Q7 cf. *Desmarestia viridis* (BROWN)

Q8 cf. *Halosiphon tomentosum* (BROWN)

Q11 *Pylaiella* cf. *varia* (BROWN)

[Q12 Colonial diatoms (related to browns)—did not sample]

Q13A cf. *Coelocladia arctica* (BROWN)

Q13B *Chaetomorpha melagonium** (GREEN)

Q15A *Chaetomorpha melagonium** (GREEN)

Q15B *Coccotylus truncatus* (RED)

Q15C cf. *Fucus distichus* (BROWN)—it's possible this is a red but it looks more like *Fucus* than anything else

Q16A *Dilsea socialis* (RED)

Q16B cf. *Petalonia* or other BROWN

Q16C cf. *Rhodomela* (RED)

Q16D cf. *Coelocladia arctica* (BROWN)

Q18 *Savoiea arctica* (RED)

Q20 *Desmarestia viridis* (BROWN)

AN3D Sponge?

FDGS cf. *Urospora neglecta* (GREEN)

*This genus is notoriously difficult to sequence. Expect failure with TufA.

Morphological taxonomy results presented above were provided by Dr. Sandra Lindstrom, Adjunct Professor, University of British Columbia.

sandra.lindstrom@botany.ubc.ca
(604) 822-2340

CANADIAN CENTRE FOR DNA BARCODING

DNA Testing Laboratory Report

FORENSIC CASE INFORMATION

File Number: BIO-22-028_Biologica Environmental Services_Tara Macdonald_2022-02-25
Accession Number: BIO-22-028

Client Name: Tara Macdonald; President/CEO
Client Address: Biologica Environmental Services, Ltd.
488-F Bay Street, Victoria BC, V8T 5H2
T: 250-479-3868 | C: 250-516-2906
Contact Name: Tara Macdonald (tara@biologica.ca)

ITEMS

Description: 13 putative Algae (8 brown; 4 red; and 2 green) samples were submitted for Sanger species verification.

Sample ID provided	Sample ID	Process ID	Putative taxon
Q1	CCDBFR0721	ABCBF730-22	*Desmarestia aculeata/ Dictyosiphon foeniculaceus*
Q3	CCDBFR0722	ABCBF731-22	cf. *Coelocladia arctica*
Q4	CCDBFR0723	ABCBF732-22	cf. *Dictyosiphon foeniculaceus*
Q8	CCDBFR0724	ABCBF733-22	cf. *Halosiphon tomentosum*
Q11	CCDBFR0725	ABCBF734-22	*Pylaiella* cf. *varia*
Q16B	CCDBFR0726	ABCBF735-22	cf. *Petalonia*
Q7	CCDBFR0727	ABCBF736-22	cf. *Desmarestia viridis*
Q15B	CCDBFR0728	ABCBF737-22	*Coccotylus truncatus*
Q16A	CCDBFR0729	ABCBF738-22	*Dilsea socialis*
Q16C	CCDBFR0730	ABCBF739-22	cf. *Rhodomela*
Q18	CCDBFR0731	ABCBF740-22	*Savoiea arctica*
Q13B	CCDBFR0732	ABCBF741-22	*Chaetomorpha melagonium*
FDGS	CCDBFR0733	ABCBF742-22	cf. *Urospora neglecta*

Dates Received: February 25, 2022
Received From: Maria Kuzmina

Dates of Analysis: March 14 – 25, 2022
Collector/Collection Site: Nguyen NguyenTX./ Canadian Centre for DNA Barcoding, Biodiversity of Ontario, University of Guelph, 50 Stone Road East, Guelph

METHODS

To ascertain the identity of the species from the submitted samples, a 2 mm by 2 mm piece of tissue from samples CCDBFR0721 - CCDBFR0733 was subsampled using sterile techniques. The samples were ground to a fine powder and then lysed. Total genomic DNA was extracted using a validated spin column and the DNA extraction protocols for brown and red algae (1), and for green algae (2). The target genetic marker (barcode region of the mitochondrial cytochrome *c* oxidase subunit I gene, COI) was amplified using polymerase chain reaction (PCR) employing the primers *GazF2-GazR2* for the samples of brown algae, and primers *GHaIF-GazR1* for samples of red algae. The plastid elongation factor Tu gene (*tufA*) was amplified using the full-length primers *TufGF4-TufAR* for the samples of green algae. Cycle sequencing was performed using a standardized commercially available BigDye Terminator v3.1 kit. Sequencing reactions were analyzed by high-voltage capillary electrophoresis on an automated ABI 3730xL DNA Analyzer. The recovered COI and *tufA* DNA sequences were compared against the references available at the public sequencing databases in order to obtain the best identification result: Barcode of Life Data management system, BOLD, (http://www.boldsystems.org/); and NCBI BLAST (https://blast.ncbi.nlm.nih.gov). The incorporated in BOLD identification tool was used for the analysis of the COI marker. Since a similar tool is not available for the *tufA* marker, it was analyzed using BLAST algorithm available at NCBI. In order to compare the query sequences with the closely related taxa, the internal references were used to build a Neighbor Joining (NJ) tree using MEGA (3).

IMAGING

All items were photographed in the Photography Lab Area by Nguyen NguyenT.X., using a Canon ELPH 300 HS, 12.1 megapixels. Pictures were uploaded to the BOLD website into the secure project called “[ABCBF] – Forensic sampling”.

INTERPRETATION

Bidirectional forward and reverse sequences were generated from all samples. Resulting trace files were assembled into contigs, and their consensus sequences were manually edited in CodonCode Aligner (version 4.1.1.) software. The resulting COI barcode sequences were compared against the Public Record Barcode Database available in BOLD. Based on a percentage of nucleotide sequence divergence (number of nucleotide substitutions) between a sequence from test sample and a reference DNA barcode, the closest match was used to infer species identity of the DNA contributor in the corresponding test sample. Images, primers, sequences, and their associated trace files with quality scores were uploaded to the secure BOLD project called “[ABCBF] – Forensic sampling”.

SUMMARY OF RESULTS

Sample ID provided	Sample ID	Process ID	Marker/Primers used	Lab Identification
Q1	CCDBFR0721	ABCBF730-22	COI / GazF2-GazR2	*Desmarestia aculeata*
Q3	CCDBFR0722	ABCBF731-22	COI / GazF2-GazR2	N/A
Q4	CCDBFR0723	ABCBF732-22	COI / GazF2-GazR2	*Dictyosiphon foeniculaceus*
Q8	CCDBFR0724	ABCBF733-22	COI / GazF2-GazR2	N/A
Q11	CCDBFR0725	ABCBF734-22	COI / GazF2-GazR2	*Acinetosporaceae*
Q16B	CCDBFR0726	ABCBF735-22	COI / GazF2-GazR2	N/A
Q7	CCDBFR0727	ABCBF736-22	COI / GazF2-GazR2	*Desmarestia*
Q15B	CCDBFR0728	ABCBF737-22	COI / GHalF-GazR1	*Coccotylus truncatus*
Q16A	CCDBFR0729	ABCBF738-22	COI / GHalF-GazR1	*Dilsea socialis*
Q16C	CCDBFR0730	ABCBF739-22	COI / GHalF-GazR1	*Rhodomela virgata*
Q18	CCDBFR0731	ABCBF740-22	COI / GHalF-GazR1	N/A
Q13B	CCDBFR0732	ABCBF741-22	tufA / TufGF4-TufAR	N/A
FDGS	CCDBFR0733	ABCBF742-22	tufA / TufGF4-TufAR	*Urospora neglecta*

Q1 (CCDBFR0721): A 620 base-pair (bp) COI DNA barcode was a 100% match to multiple BOLD reference records representing *Desmarestia aculeata*. Based on the inferred identity of the sequence recovered from **Q1**, we can establish a species level match to ***Desmarestia aculeata*** (Fig. 1).

Q4 (CCDBFR0723): A 453 bp COI DNA barcode was a 100% match to multiple BOLD reference records representing *Dictyosiphon foeniculaceus*. Based on the inferred identity of the sequence recovered from **Q4**, we can establish a species level match to ***Dictyosiphon foeniculaceus*** (Fig. 2)***.***

Q11 (CCDBFR0725): A 610 bp COI DNA barcode was a 99.69% match to BOLD reference record, which was identified to the family (*Acinetosporaceae sp. 3AP-2016*). Based on the inferred identity of the sequence recovered from **Q11**, we can establish a family level match to ***Acinetosporaceae*** (Fig. 4).

Q7 (CCDBFR0727): A 618 bp COI DNA barcode was a 94.09% match to BOLD reference record representing *Desmarestia viridis*. Based on the inferred identity of the sequence recovered from **Q7**, we can establish a genus level match to ***Desmarestia*** (Fig. 3).

Q15B (CCDBFR0728): A 563 bp COI DNA barcode was a 100% match to BOLD reference record representing *Coccotylus truncatus*. Based on the inferred identity of the sequence recovered from **Q15B**, we can establish a species level match to ***Coccotylus truncatus*** (Fig. 5)***.***

Q16A (CCDBFR0729): A 570 bp COI DNA barcode was a 100% match to BOLD reference record representing *Dilsea socialis*. Based on the inferred identity of the sequence recovered from **Q16A**, we can establish a species level match to ***Dilsea socialis*** (Fig. 6).

Q16C (CCDBFR0730): A 620 bp COI DNA barcode was a 100% match to multiple BOLD reference records representing *Rhodomela virgata*. Based on the inferred identity of the sequence recovered from **Q16C**, we can establish a species level match to ***Rhodomela virgata*** (Fig. 7).

FDGS (CCDBFR733): A 776 bp *tufA* sequences were a 99.86% match to *Urospora neglecta* (NCBI, accession numbers MZ401487.1). The comparison of FDGS sequences with the available references of six other species of *Urospora* using the NJ tree indicated that the query sequences form a monophyletic clade with the other references for *Urospora neglecta* (Fig. 8). Based on the information available in the public sequencing databases we concluded that the sample **FDGS** belongs to ***Urospora neglecta***.

The samples **Q3, Q8, Q16B, Q18**, and **Q13B** (**CCDBFR0722, CCDBFR0724, CCDBFR0726, CCDBFR0731**, and **CCDBFR0732**) failed to generate readable sequences.

References

1. Gary W Saunders (2005). Applying DNA barcoding to red macroalgae: a preliminary appraisal holds promise for future applications. *Philosophical Transactions of the Royal Society B: Biological Sciences* 360, 1879-1888.
2. Ivanova et al. (2008). Semi-automated, Membrane-Based Protocol for DNA Isolation from Plants. *Plant Molecular Biology Reports*.
3. Sudhir Kumar, Koichiro Tamura, and Masatoshi Nei. 1993. MEGA: Molecular Evolutionary Genetics Analysis, version 1.01. The Pennsylvania State University, University Park, PA 16802.

RESULTS REPORTED BY:

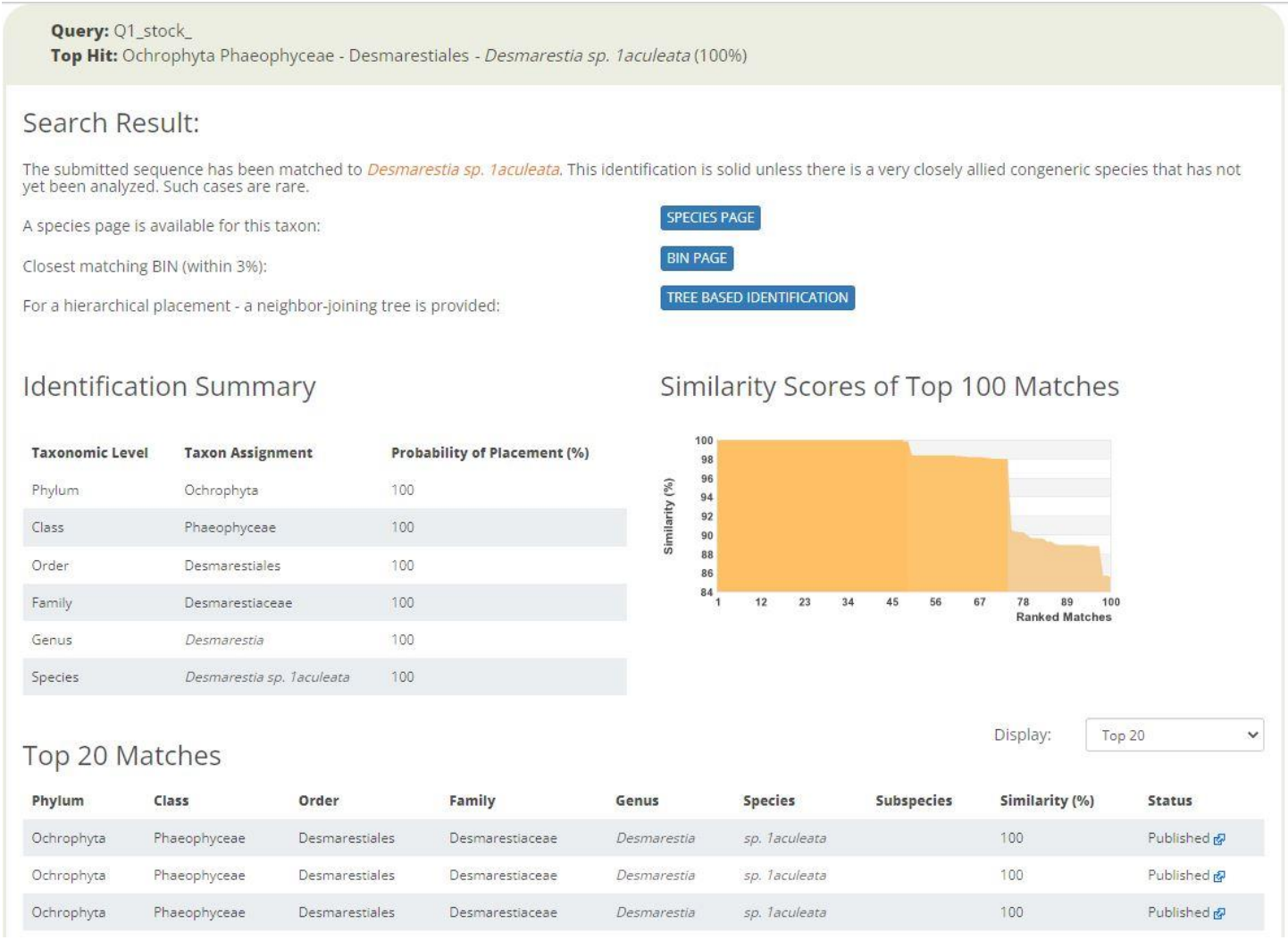
Nguyen NguyenTX., MSc; Wildlife Forensic Technician

RESULTS REVIEWED BY:

Maria Kuzmina, PhD; Plant Lead

Evgeny V. Zakharov, PhD; Director, CCDB

FIGURES



Query: Q1_stock_
Top Hit: Ochrophyta Phaeophyceae - Desmarestiales - *Desmarestia sp. 1aculeata* (100%)

Search Result:

The submitted sequence has been matched to *Desmarestia sp. 1aculeata*. This identification is solid unless there is a very closely allied congeneric species that has not yet been analyzed. Such cases are rare.

A species page is available for this taxon: SPECIES PAGE

Closest matching BIN (within 3%): BIN PAGE

For a hierarchical placement - a neighbor-joining tree is provided: TREE BASED IDENTIFICATION

Identification Summary

Taxonomic Level	Taxon Assignment	Probability of Placement (%)
Phylum	Ochrophyta	100
Class	Phaeophyceae	100
Order	Desmarestiales	100
Family	Desmarestiaceae	100
Genus	*Desmarestia*	100
Species	*Desmarestia sp. 1aculeata*	100

Similarity Scores of Top 100 Matches

Top 20 Matches

Display: Top 20

Phylum	Class	Order	Family	Genus	Species	Subspecies	Similarity (%)	Status
Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia*	*sp. 1aculeata*		100	Published
Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia*	*sp. 1aculeata*		100	Published
Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia*	*sp. 1aculeata*		100	Published

Figure 1 – Sequence trace files and species identification match percentage on BOLD for sample Q1 (CCDBFR0721).

Query: Q4_stock_
Top Hit: Ochrophyta Phaeophyceae - Ectocarpales - *Dictyosiphon foeniculaceus* (100%)

Search Result:

The submitted sequence has been matched to *Dictyosiphon foeniculaceus*. This identification is solid unless there is a very closely allied congeneric species that has not yet been analyzed. Such cases are rare.

A species page is available for this taxon: SPECIES PAGE

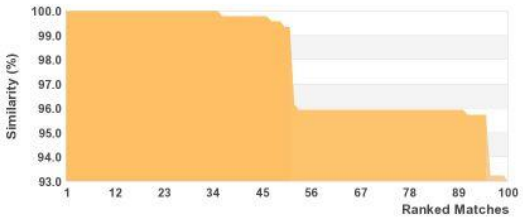
Closest matching BIN (within 3%): BIN PAGE

For a hierarchical placement - a neighbor-joining tree is provided: TREE BASED IDENTIFICATION

Identification Summary

Taxonomic Level	Taxon Assignment	Probability of Placement (%)
Phylum	Ochrophyta	100
Class	Phaeophyceae	100
Order	Ectocarpales	100
Family	Chordariaceae	100
Genus	*Dictyosiphon*	100
Species	*Dictyosiphon foeniculaceus*	100

Similarity Scores of Top 100 Matches

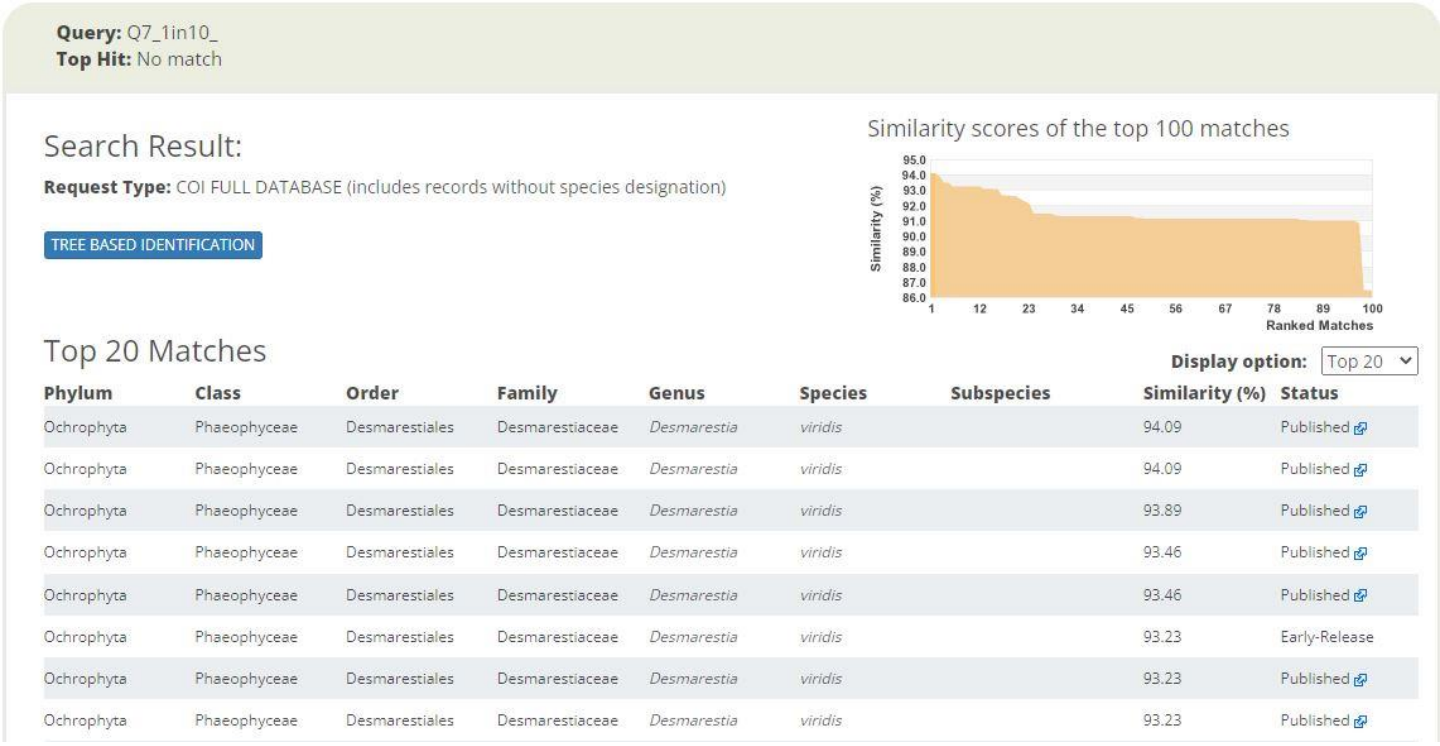


Top 20 Matches

Display: Top 20

Phylum	Class	Order	Family	Genus	Species	Subspecies	Similarity (%)	Status
Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae	*Dictyosiphon*	*foeniculaceus*		100	Published
Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae	*Dictyosiphon*	*foeniculaceus*		100	Published
Ochrophyta	Phaeophyceae	Ectocarpales	Chordariaceae	*Dictyosiphon*	*foeniculaceus*		100	Published

Figure 2 – Sequence trace files and species identification match percentage on BOLD for sample Q4 (CCDBFR0723)



Query: Q7_1in10_
Top Hit: No match

Search Result:

Request Type: COI FULL DATABASE (includes records without species designation)

TREE BASED IDENTIFICATION

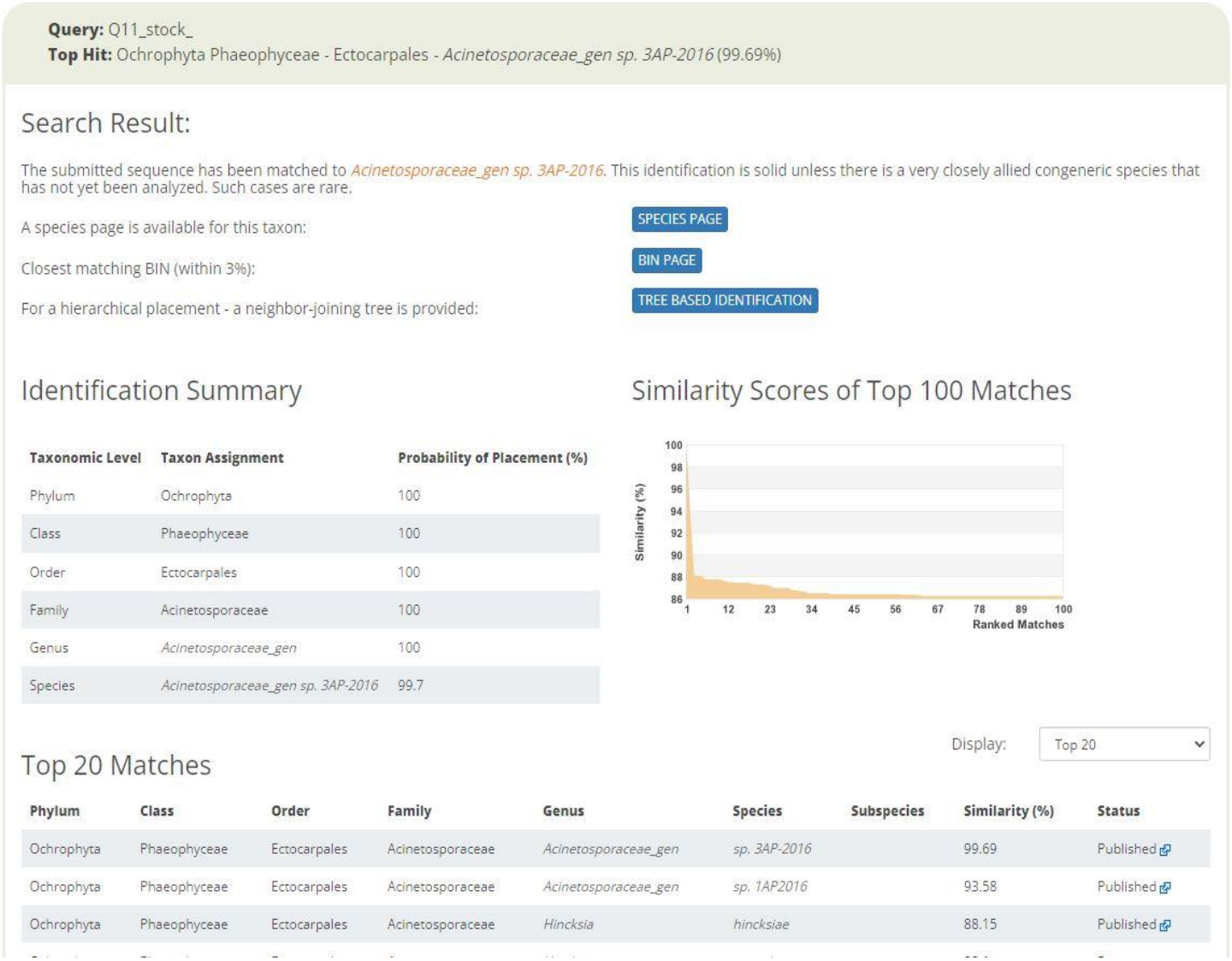
Similarity scores of the top 100 matches

Top 20 Matches

Display option: Top 20

Phylum	Class	Order	Family	Genus	Species	Subspecies	Similarity (%)	Status
Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia*	*viridis*		94.09	Published
Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia*	*viridis*		94.09	Published
Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia*	*viridis*		93.89	Published
Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia*	*viridis*		93.46	Published
Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia*	*viridis*		93.46	Published
Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia*	*viridis*		93.23	Early-Release
Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia*	*viridis*		93.23	Published
Ochrophyta	Phaeophyceae	Desmarestiales	Desmarestiaceae	*Desmarestia*	*viridis*		93.23	Published

Figure 3 – Sequence trace files and species identification match percentage on BOLD for sample Q7 (CCDBFR0727)



Query: Q11_stock_
Top Hit: Ochrophyta Phaeophyceae - Ectocarpales - *Acinetosporaceae_gen sp. 3AP-2016* (99.69%)

Search Result:

The submitted sequence has been matched to *Acinetosporaceae_gen sp. 3AP-2016*. This identification is solid unless there is a very closely allied congeneric species that has not yet been analyzed. Such cases are rare.

A species page is available for this taxon: SPECIES PAGE

Closest matching BIN (within 3%): BIN PAGE

For a hierarchical placement - a neighbor-joining tree is provided: TREE BASED IDENTIFICATION

Identification Summary

Taxonomic Level	Taxon Assignment	Probability of Placement (%)
Phylum	Ochrophyta	100
Class	Phaeophyceae	100
Order	Ectocarpales	100
Family	Acinetosporaceae	100
Genus	*Acinetosporaceae_gen*	100
Species	*Acinetosporaceae_gen sp. 3AP-2016*	99.7

Similarity Scores of Top 100 Matches

Top 20 Matches

Display: Top 20

Phylum	Class	Order	Family	Genus	Species	Subspecies	Similarity (%)	Status
Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae	*Acinetosporaceae_gen*	*sp. 3AP-2016*		99.69	Published
Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae	*Acinetosporaceae_gen*	*sp. 1AP2016*		93.58	Published
Ochrophyta	Phaeophyceae	Ectocarpales	Acinetosporaceae	*Hincksia*	*hincksiae*		88.15	Published

Figure 4 – Sequence trace files and species identification match percentage on BOLD for sample Q11 (CCDBFR0725)

Query: Q15B_stock_
Top Hit: Rhodophyta Florideophyceae - Gigartinales - *Coccotylus truncatus* (100%)

Search Result:

A species level match could not be made, the queried specimen is likely to be one of the following:

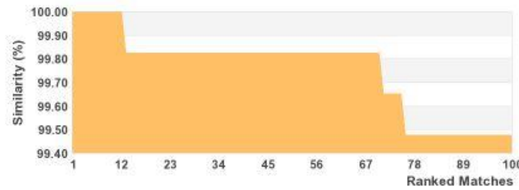
Coccotylus truncatus
Coccotylus hartzii

For a hierarchical placement - a neighbor-joining tree is provided: TREE BASED IDENTIFICATION

Identification Summary

Taxonomic Level	Taxon Assignment	Probability of Placement (%)
Phylum	Rhodophyta	100
Class	Florideophyceae	100
Order	Gigartinales	100
Family	Phyllophoraceae	100
Genus	*Coccotylus*	100

Similarity Scores of Top 100 Matches



Top 100 Matches

Display: Top 100

Phylum	Class	Order	Family	Genus	Species	Subspecies	Similarity (%)	Status
Rhodophyta	Florideophyceae	Gigartinales	Phyllophoraceae	*Coccotylus*	*truncatus*		100	Published
Rhodophyta	Florideophyceae	Gigartinales	Phyllophoraceae	*Coccotylus*	*truncatus*		100	Published
Rhodophyta	Florideophyceae	Gigartinales	Phyllophoraceae	*Coccotylus*	*truncatus*		100	Published
Rhodophyta	Florideophyceae	Gigartinales	Phyllophoraceae	*Coccotylus*	*truncatus*		100	Published
Rhodophyta	Florideophyceae	Gigartinales	Phyllophoraceae	*Coccotylus*	*truncatus*		100	Published
Rhodophyta	Florideophyceae	Gigartinales	Phyllophoraceae	*Coccotylus*	*truncatus*		100	Published

Figure 5 – Sequence trace files and species identification match percentage on BOLD for sample Q15B (CCDBFR0728)

Query: Q16A_stock_
Top Hit: Rhodophyta Florideophyceae - Gigartinales - *Dilsea socialis* (100%)

Search Result:

The submitted sequence has been matched to *Dilsea socialis*. This identification is solid unless there is a very closely allied congeneric species that has not yet been analyzed. Such cases are rare.

A species page is available for this taxon: SPECIES PAGE

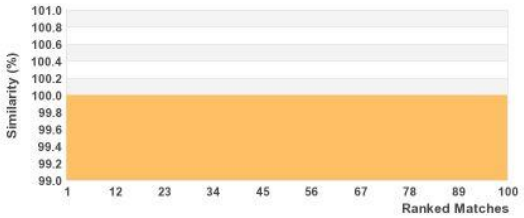
Closest matching BIN (within 3%): BIN PAGE

For a hierarchical placement - a neighbor-joining tree is provided: TREE BASED IDENTIFICATION

Identification Summary

Taxonomic Level	Taxon Assignment	Probability of Placement (%)
Phylum	Rhodophyta	100
Class	Florideophyceae	100
Order	Gigartinales	100
Family	Dumontiaceae	100
Genus	*Dilsea*	100
Species	*Dilsea socialis*	100

Similarity Scores of Top 100 Matches



Display: Top 20

Top 20 Matches

Phylum	Class	Order	Family	Genus	Species	Subspecies	Similarity (%)	Status
Rhodophyta	Florideophyceae	Gigartinales	Dumontiaceae	*Dilsea*	*socialis*		100	Published
Rhodophyta	Florideophyceae	Gigartinales	Dumontiaceae	*Dilsea*	*socialis*		100	Published
Rhodophyta	Florideophyceae	Gigartinales	Dumontiaceae	*Dilsea*	*socialis*		100	Published

Figure 6 – Sequence trace files and species identification match percentage on BOLD for sample Q16A (CCDBFR0729)

Query: Q16C_1in5_
Top Hit: Rhodophyta Florideophyceae - Ceramiales - *Rhodomela virgata* (100%)

Search Result:

The submitted sequence has been matched to *Rhodomela virgata*. This identification is solid unless there is a very closely allied congeneric species that has not yet been analyzed. Such cases are rare.

A species page is available for this taxon: SPECIES PAGE

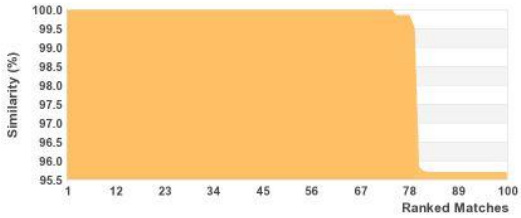
Closest matching BIN (within 3%): BIN PAGE

For a hierarchical placement - a neighbor-joining tree is provided: TREE BASED IDENTIFICATION

Identification Summary

Taxonomic Level	Taxon Assignment	Probability of Placement (%)
Phylum	Rhodophyta	100
Class	Florideophyceae	100
Order	Ceramiales	100
Family	Rhodomelaceae	100
Genus	*Rhodomela*	100
Species	*Rhodomela virgata*	100

Similarity Scores of Top 100 Matches



Display: Top 20

Top 20 Matches

Phylum	Class	Order	Family	Genus	Species	Subspecies	Similarity (%)	Status
Rhodophyta	Florideophyceae	Ceramiales	Rhodomelaceae	*Rhodomela*	*virgata*		100	Published
Rhodophyta	Florideophyceae	Ceramiales	Rhodomelaceae	*Rhodomela*	*virgata*		100	Published
Rhodophyta	Florideophyceae	Ceramiales	Rhodomelaceae	*Rhodomela*	*virgata*		100	Published

Figure 7 – Sequence trace files and species identification match percentage on BOLD for sample Q16C (CCDBFR0730)

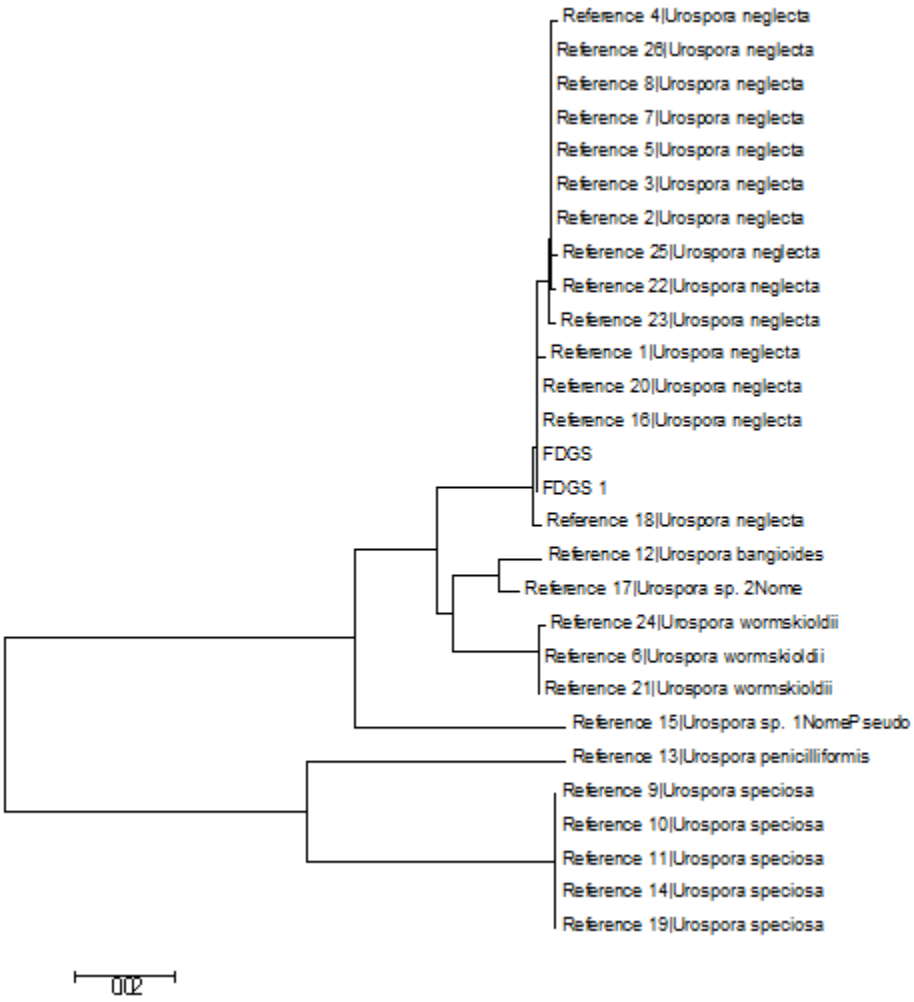
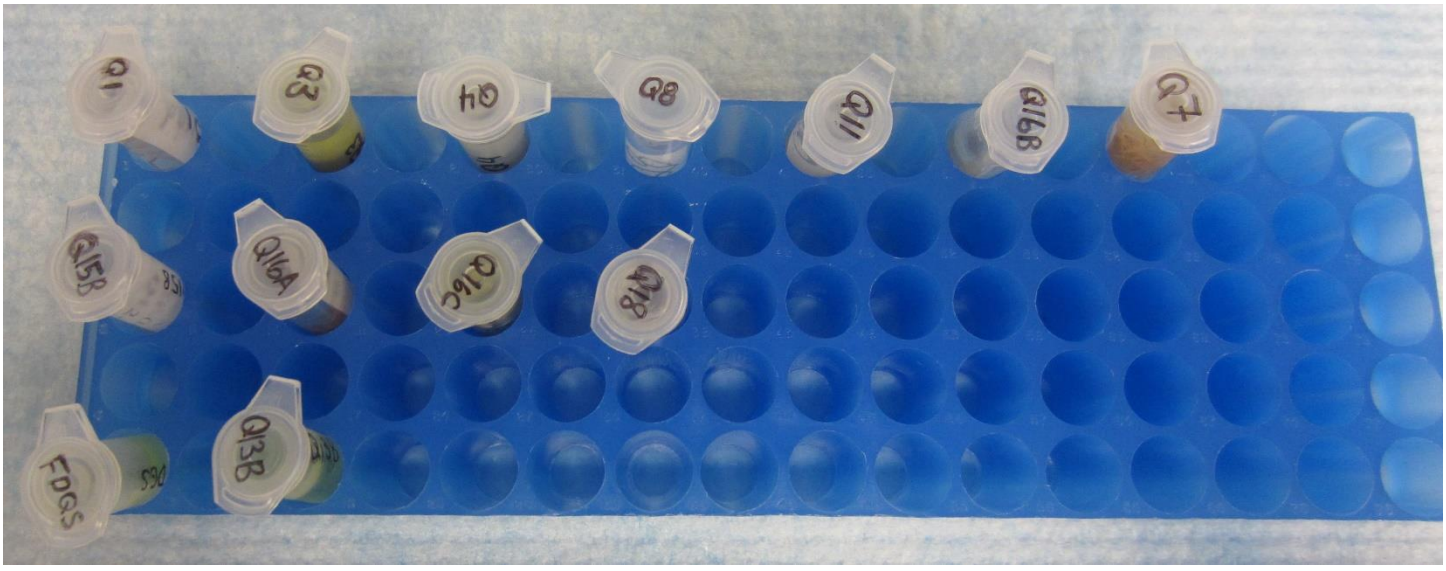


Figure 8 – Sequence trace files and the aligned sequences compared for sample FDGS (CCDBFR0733)

Appendix I. Image Inventory



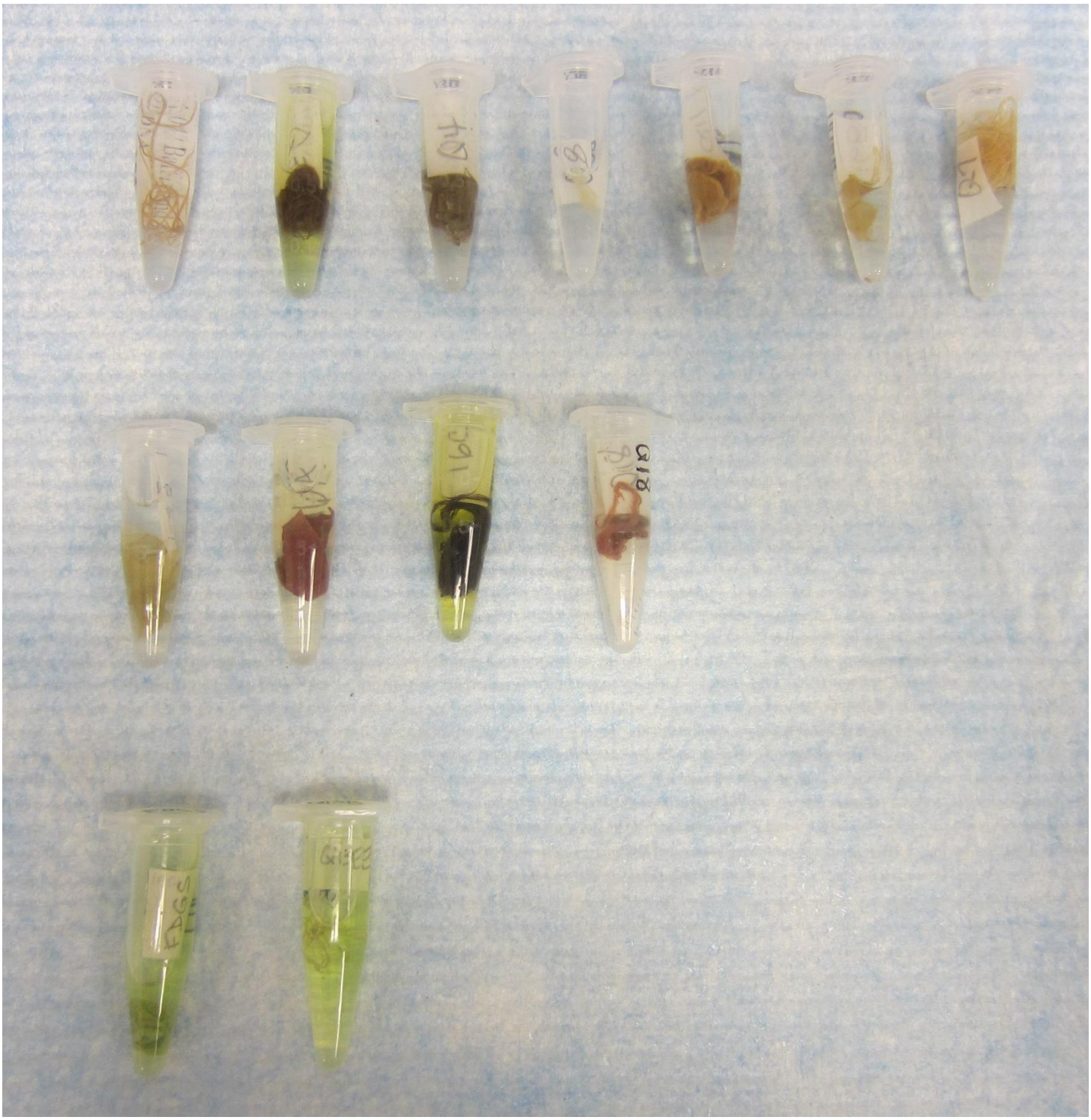
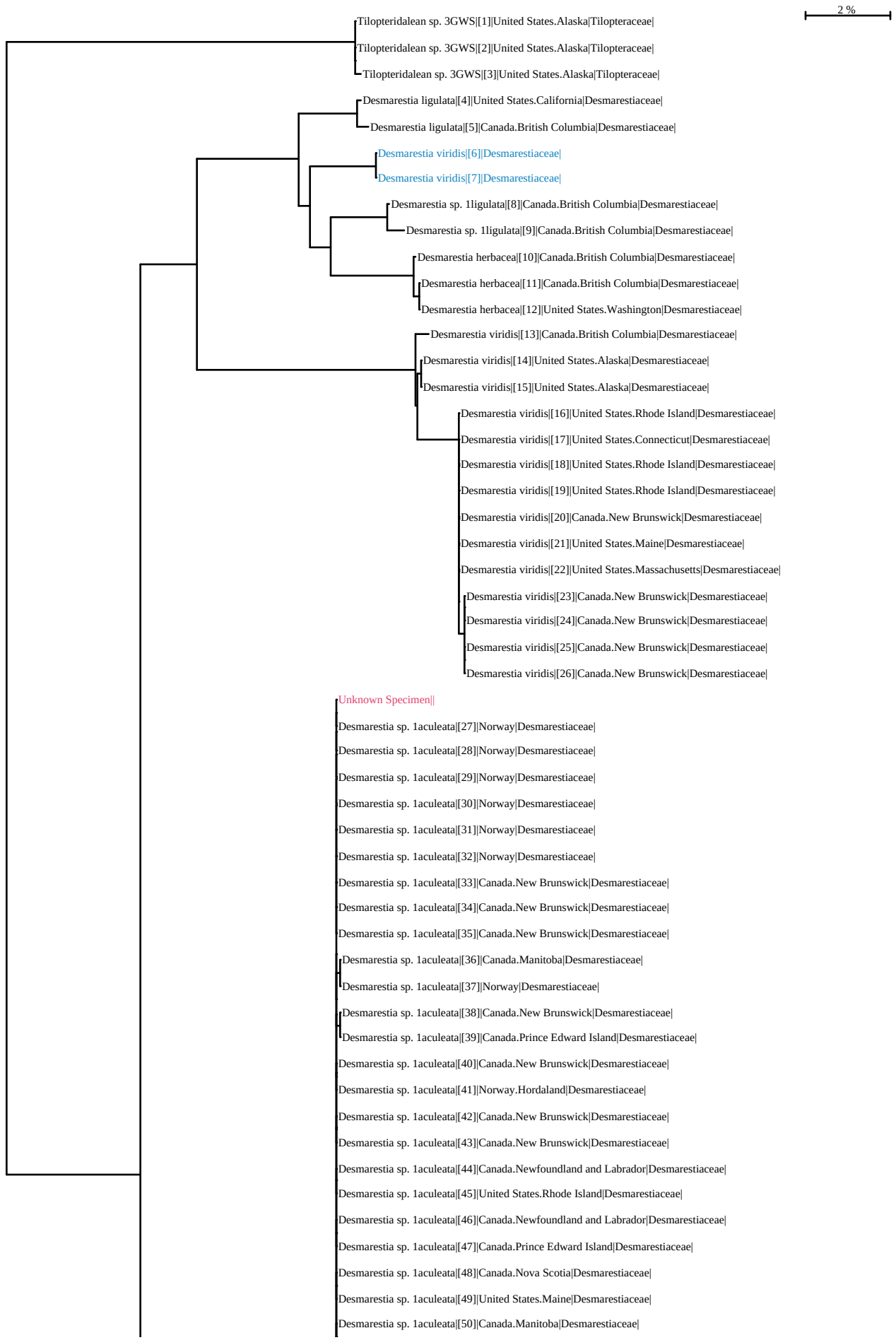


Image 1-2-3: Sample CCDBFR0721-CCDBFF0733 submitted

BOLD TaxonID Tree

Title	: COI SPECIES DATABASE Tree
Date	: 22-April-2022
Data Type	: Nucleotide
Distance Model	: Kimura 2 Parameter
Marker	: COI-5P
Codon Positions	: 1st, 2nd, 3rd
Labels	: Extra Info, Country & Province, Family
Filters	: Length > 200
Attachment	: Photographs & Spreadsheet
Sequence Count	: 101
Species count	: 8
Genus count	: 2
Family count	: 2
Unidentified	: 1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Desmarestia viridis|[7]|Desmarestiaceae|
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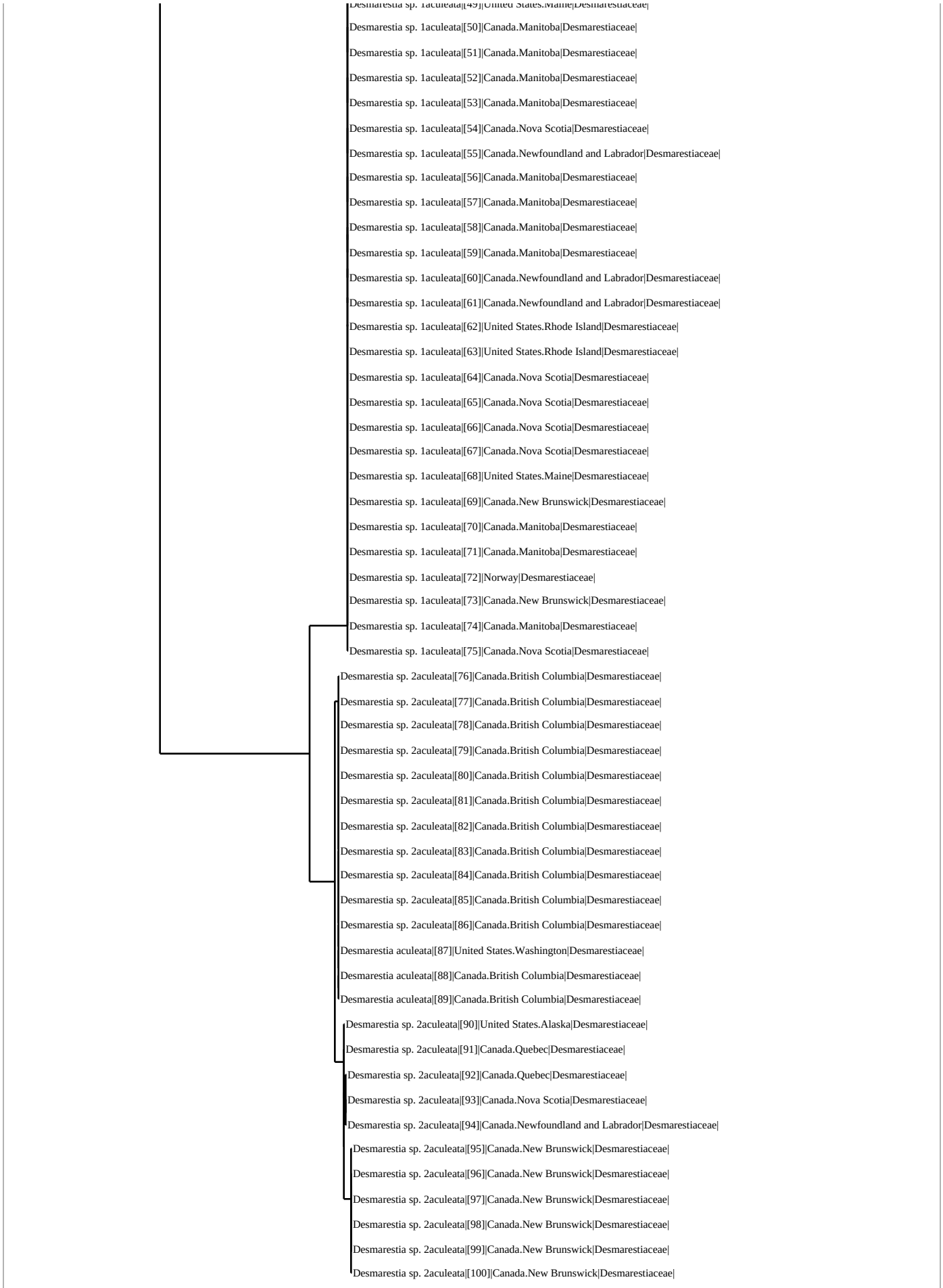
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Desmarestia sp. 2aculeata|[95]|Canada.New Brunswick|Desmarestiaceae|
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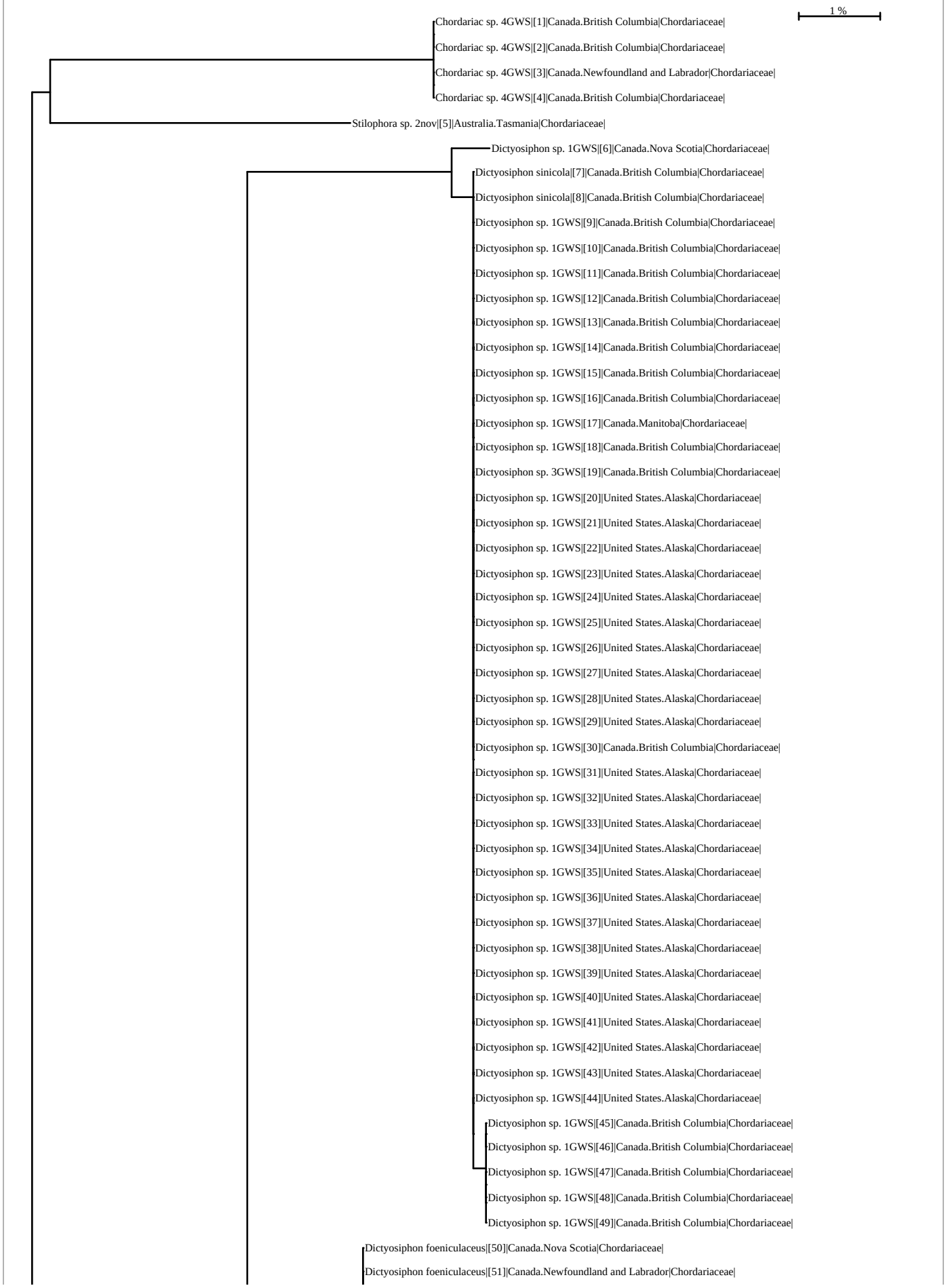
BOLD TaxonID Tree

Title	: COI SPECIES DATABASE Tree
Date	: 22-April-2022
Data Type	: Nucleotide
Distance Model	: Kimura 2 Parameter
Marker	: COI-5P
Codon Positions	: 1st, 2nd, 3rd
Labels	: Extra Info, Country & Province, Family
Filters	: Length > 200
Attachment	: Photographs & Spreadsheet
Sequence Count	: 101
Species count	: 6
Genus count	: 3
Family count	: 1
Unidentified	: 1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Chordariac sp. 4GWS|[4]|Canada.British Columbia|Chordariaceae|
Stilophora sp. 2nov|[5]|Australia.Tasmania|Chordariaceae|
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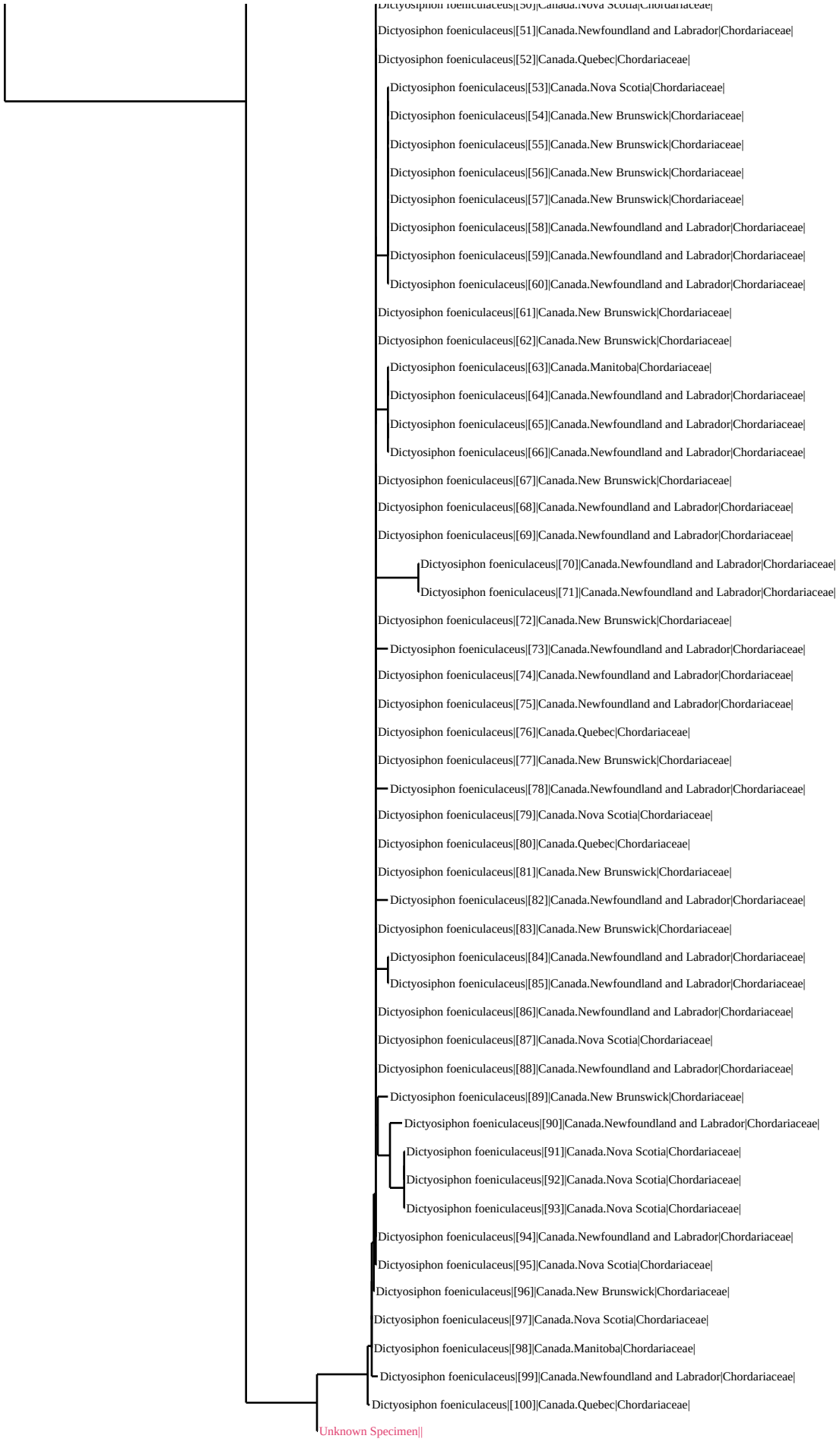
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BOLD TaxonID Tree

Title	: COI FULL DATABASE includes records without species designati...
Date	: 22-April-2022
Data Type	: Nucleotide
Distance Model	: Kimura 2 Parameter
Marker	: COI-5P
Codon Positions	: 1st, 2nd, 3rd
Labels	: Extra Info, Country & Province, Family
Filters	: Length > 200
Attachment	: Photographs & Spreadsheet
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Species count	: 9
Genus count	: 3
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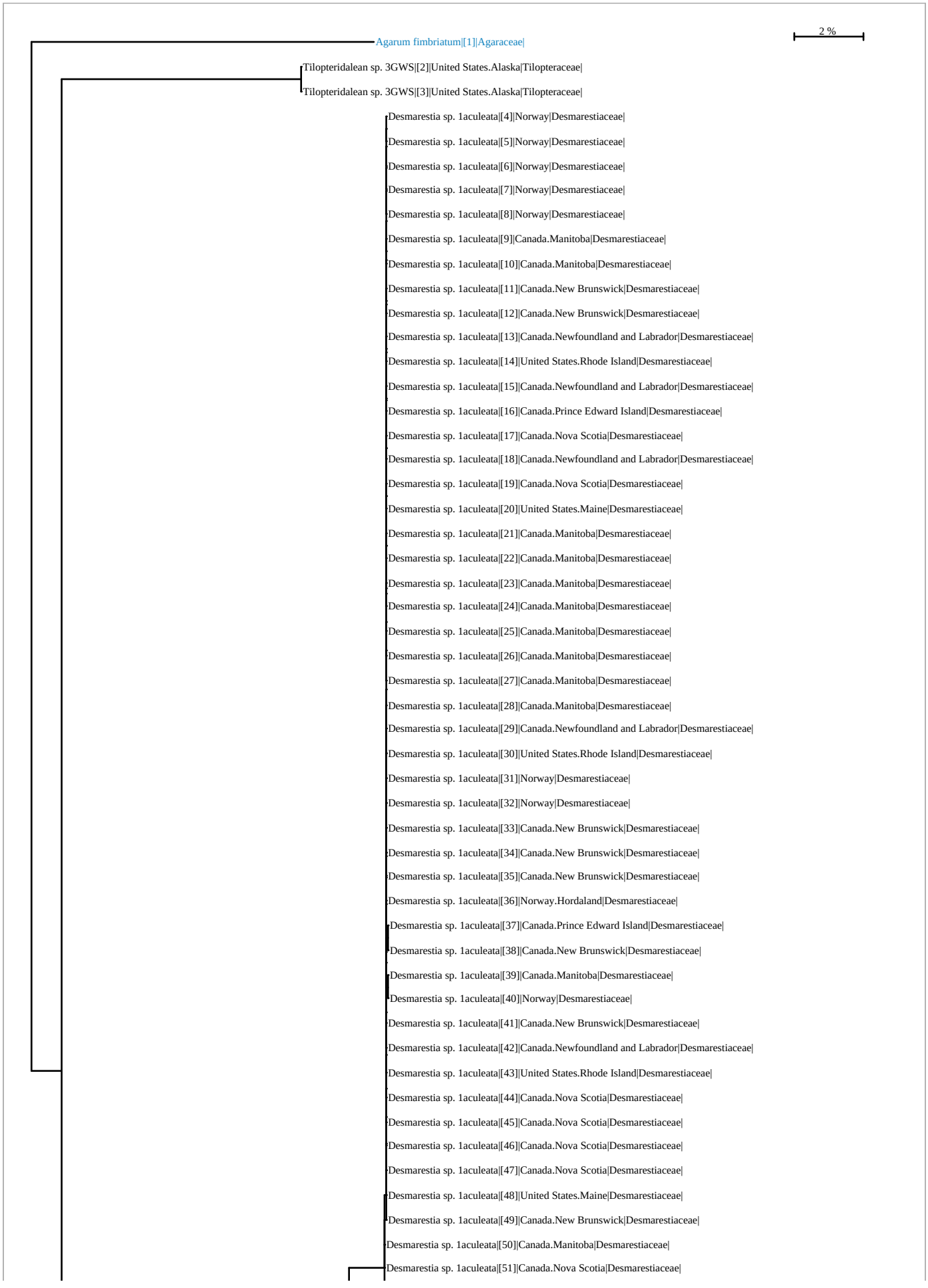
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Desmarestia sp. 1aculeata|[44]|Canada.Nova Scotia|Desmarestiaceae|
Desmarestia sp. 1aculeata|[45]|Canada.Nova Scotia|Desmarestiaceae|
Desmarestia sp. 1aculeata|[46]|Canada.Nova Scotia|Desmarestiaceae|
Desmarestia sp. 1aculeata|[47]|Canada.Nova Scotia|Desmarestiaceae|
Desmarestia sp. 1aculeata|[48]|United States.Maine|Desmarestiaceae|
Desmarestia sp. 1aculeata|[49]|Canada.New Brunswick|Desmarestiaceae|
Desmarestia sp. 1aculeata|[50]|Canada.Manitoba|Desmarestiaceae|
Desmarestia sp. 1aculeata|[51]|Canada.Nova Scotia|Desmarestiaceae|


Desmarestia sp. 1aculeata|[50]|Canada.Manitoba|Desmarestiaceae|
Desmarestia sp. 1aculeata|[51]|Canada.Nova Scotia|Desmarestiaceae|
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Desmarestia sp. 2aculeata|[59]|Canada.Nova Scotia|Desmarestiaceae|
Desmarestia sp. 2aculeata|[60]|Canada.Newfoundland and Labrador|Desmarestiaceae|
Desmarestia sp. 2aculeata|[61]|Canada.Quebec|Desmarestiaceae|
Desmarestia sp. 2aculeata|[62]|Canada.Quebec|Desmarestiaceae|
Desmarestia sp. 2aculeata|[63]|United States.Alaska|Desmarestiaceae|
Desmarestia sp. 2aculeata|[64]|Canada.British Columbia|Desmarestiaceae|
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Desmarestia sp. 2aculeata|[67]|Canada.British Columbia|Desmarestiaceae|
Desmarestia sp. 2aculeata|[68]|Canada.British Columbia|Desmarestiaceae|
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Desmarestia viridis|[85]|Canada.New Brunswick|Desmarestiaceae|
Desmarestia viridis|[86]|United States.Maine|Desmarestiaceae|
Desmarestia viridis|[87]|United States.Massachusetts|Desmarestiaceae|
Desmarestia viridis|[88]|Canada.New Brunswick|Desmarestiaceae|
Desmarestia viridis|[89]|Canada.New Brunswick|Desmarestiaceae|
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Desmarestia viridis|[91]|Canada.New Brunswick|Desmarestiaceae|
Unknown Specimen||
Desmarestia ligulata|[92]|United States.California|Desmarestiaceae|
Desmarestia ligulata|[93]|Canada.British Columbia|Desmarestiaceae|
Desmarestia viridis|[94]|Desmarestiaceae|
Desmarestia viridis|[95]|Desmarestiaceae|
Desmarestia herbacea|[96]|Canada.British Columbia|Desmarestiaceae|
Desmarestia herbacea|[97]|United States.Washington|Desmarestiaceae|
Desmarestia herbacea|[98]|Canada.British Columbia|Desmarestiaceae|
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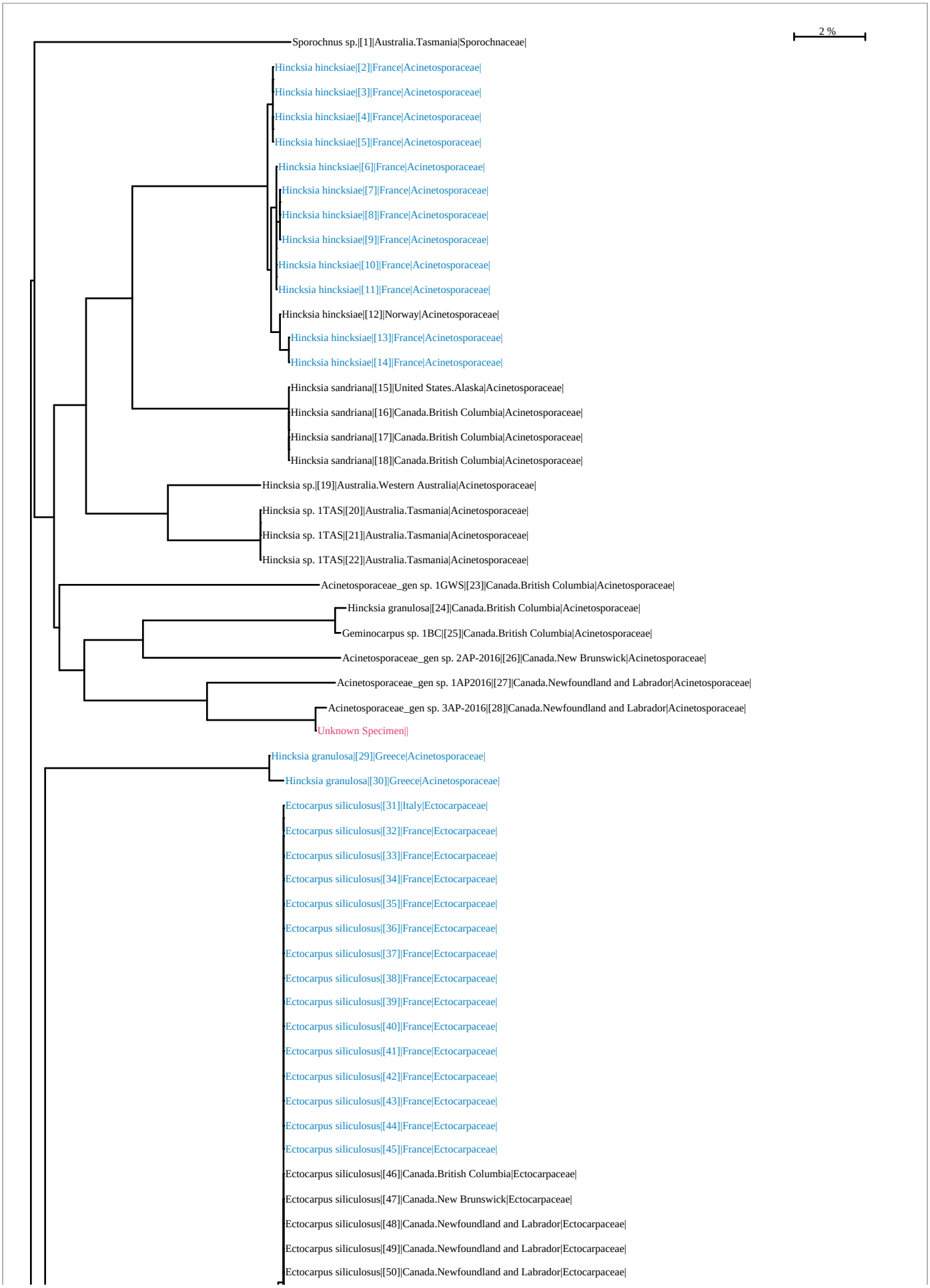
Desmarestia sp. 1ligulata|[100]|Canada.British Columbia|Desmarestiaceae|

BOLD TaxonID Tree

Title	: COI SPECIES DATABASE Tree
Date	: 22-April-2022
Data Type	: Nucleotide
Distance Model	: Kimura 2 Parameter
Marker	: COI-5P
Codon Positions	: 1st, 2nd, 3rd
Labels	: Extra Info, Country & Province, Family
Filters	: Length > 200
Attachment	: Photographs & Spreadsheet
Sequence Count	: 101
Species count	: 18
Genus count	: 8
Family count	: 4
Unidentified	: 1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Hincksia hincksiae|[3]|France|Acinetosporaceae|
Hincksia hincksiae|[4]|France|Acinetosporaceae|
Hincksia hincksiae|[5]|France|Acinetosporaceae|
Hincksia hincksiae|[6]|France|Acinetosporaceae|
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Hincksia hincksiae|[8]|France|Acinetosporaceae|
Hincksia hincksiae|[9]|France|Acinetosporaceae|
Hincksia hincksiae|[10]|France|Acinetosporaceae|
Hincksia hincksiae|[11]|France|Acinetosporaceae|
Hincksia hincksiae|[12]|Norway|Acinetosporaceae|
Hincksia hincksiae|[13]|France|Acinetosporaceae|
Hincksia hincksiae|[14]|France|Acinetosporaceae|
Hincksia sandriana|[15]|United States.Alaska|Acinetosporaceae|
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Hincksia sandriana|[17]|Canada.British Columbia|Acinetosporaceae|
Hincksia sandriana|[18]|Canada.British Columbia|Acinetosporaceae|
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Hincksia sp. 1TAS|[20]|Australia.Tasmania|Acinetosporaceae|
Hincksia sp. 1TAS|[21]|Australia.Tasmania|Acinetosporaceae|
Hincksia sp. 1TAS|[22]|Australia.Tasmania|Acinetosporaceae|
Acinetosporaceae_gen sp. 1GWS|[23]|Canada.British Columbia|Acinetosporaceae|
Hincksia granulosa|[24]|Canada.British Columbia|Acinetosporaceae|
Geminocarpus sp. 1BC|[25]|Canada.British Columbia|Acinetosporaceae|
Acinetosporaceae_gen sp. 2AP-2016|[26]|Canada.New Brunswick|Acinetosporaceae|
Acinetosporaceae_gen sp. 1AP2016|[27]|Canada.Newfoundland and Labrador|Acinetosporaceae|
Acinetosporaceae_gen sp. 3AP-2016|[28]|Canada.Newfoundland and Labrador|Acinetosporaceae|
Unknown Specimen||
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Hincksia granulosa|[30]|Greece|Acinetosporaceae|
Ectocarpus siliculosus|[31]|Italy|Ectocarpaceae|
Ectocarpus siliculosus|[32]|France|Ectocarpaceae|
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Ectocarpus siliculosus|[34]|France|Ectocarpaceae|
Ectocarpus siliculosus|[35]|France|Ectocarpaceae|
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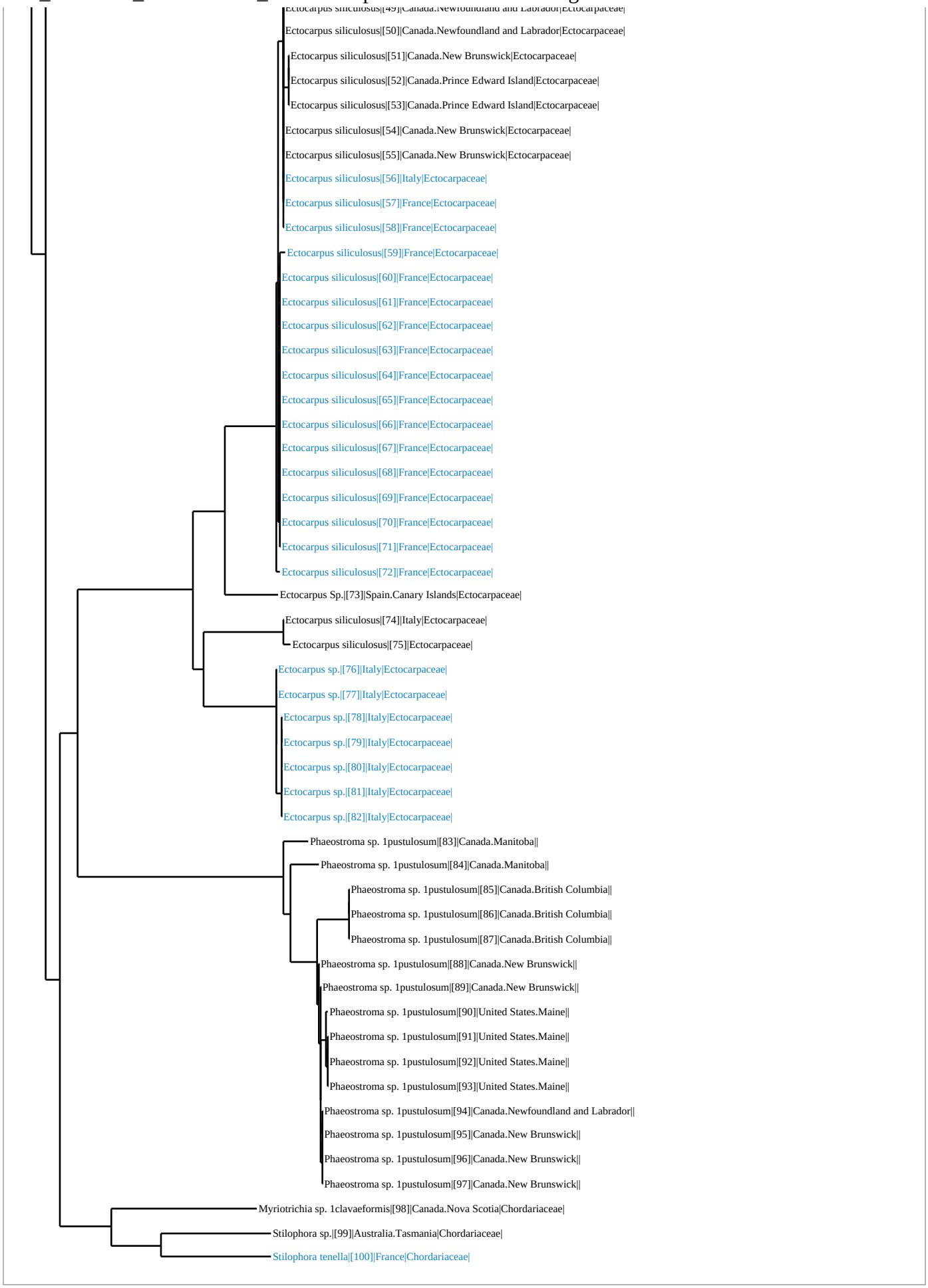
Ectocarpus siliculosus|[37]|France|Ectocarpaceae|
Ectocarpus siliculosus|[38]|France|Ectocarpaceae|
Ectocarpus siliculosus|[39]|France|Ectocarpaceae|
Ectocarpus siliculosus|[40]|France|Ectocarpaceae|
Ectocarpus siliculosus|[41]|France|Ectocarpaceae|
Ectocarpus siliculosus|[42]|France|Ectocarpaceae|
Ectocarpus siliculosus|[43]|France|Ectocarpaceae|
Ectocarpus siliculosus|[44]|France|Ectocarpaceae|
Ectocarpus siliculosus|[45]|France|Ectocarpaceae|
Ectocarpus siliculosus|[46]|Canada.British Columbia|Ectocarpaceae|
Ectocarpus siliculosus|[47]|Canada.New Brunswick|Ectocarpaceae|
Ectocarpus siliculosus|[48]|Canada.Newfoundland and Labrador|Ectocarpaceae|
Ectocarpus siliculosus|[49]|Canada.Newfoundland and Labrador|Ectocarpaceae|
Ectocarpus siliculosus|[50]|Canada.Newfoundland and Labrador|Ectocarpaceae|


Ectocarpus siliculosus|[49]|Canada.Newfoundland and Labrador|Ectocarpaceae|
Ectocarpus siliculosus|[50]|Canada.Newfoundland and Labrador|Ectocarpaceae|
Ectocarpus siliculosus|[51]|Canada.New Brunswick|Ectocarpaceae|
Ectocarpus siliculosus|[52]|Canada.Prince Edward Island|Ectocarpaceae|
Ectocarpus siliculosus|[53]|Canada.Prince Edward Island|Ectocarpaceae|
Ectocarpus siliculosus|[54]|Canada.New Brunswick|Ectocarpaceae|
Ectocarpus siliculosus|[55]|Canada.New Brunswick|Ectocarpaceae|
Ectocarpus siliculosus|[56]|Italy|Ectocarpaceae|
Ectocarpus siliculosus|[57]|France|Ectocarpaceae|
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Ectocarpus siliculosus|[59]|France|Ectocarpaceae|
Ectocarpus siliculosus|[60]|France|Ectocarpaceae|
Ectocarpus siliculosus|[61]|France|Ectocarpaceae|
Ectocarpus siliculosus|[62]|France|Ectocarpaceae|
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Ectocarpus siliculosus|[65]|France|Ectocarpaceae|
Ectocarpus siliculosus|[66]|France|Ectocarpaceae|
Ectocarpus siliculosus|[67]|France|Ectocarpaceae|
Ectocarpus siliculosus|[68]|France|Ectocarpaceae|
Ectocarpus siliculosus|[69]|France|Ectocarpaceae|
Ectocarpus siliculosus|[70]|France|Ectocarpaceae|
Ectocarpus siliculosus|[71]|France|Ectocarpaceae|
Ectocarpus siliculosus|[72]|France|Ectocarpaceae|
Ectocarpus Sp.|[73]|Spain.Canary Islands|Ectocarpaceae|
Ectocarpus siliculosus|[74]|Italy|Ectocarpaceae|
Ectocarpus siliculosus|[75]|Ectocarpaceae|
Ectocarpus sp.|[76]|Italy|Ectocarpaceae|
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Ectocarpus sp.|[78]|Italy|Ectocarpaceae|
Ectocarpus sp.|[79]|Italy|Ectocarpaceae|
Ectocarpus sp.|[80]|Italy|Ectocarpaceae|
Ectocarpus sp.|[81]|Italy|Ectocarpaceae|
Ectocarpus sp.|[82]|Italy|Ectocarpaceae|
Phaeostroma sp. 1pustulosum|[83]|Canada.Manitoba||
Phaeostroma sp. 1pustulosum|[84]|Canada.Manitoba||
Phaeostroma sp. 1pustulosum|[85]|Canada.British Columbia||
Phaeostroma sp. 1pustulosum|[86]|Canada.British Columbia||
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Phaeostroma sp. 1pustulosum|[88]|Canada.New Brunswick||
Phaeostroma sp. 1pustulosum|[89]|Canada.New Brunswick||
Phaeostroma sp. 1pustulosum|[90]|United States.Maine||
Phaeostroma sp. 1pustulosum|[91]|United States.Maine||
Phaeostroma sp. 1pustulosum|[92]|United States.Maine||
Phaeostroma sp. 1pustulosum|[93]|United States.Maine||
Phaeostroma sp. 1pustulosum|[94]|Canada.Newfoundland and Labrador||
Phaeostroma sp. 1pustulosum|[95]|Canada.New Brunswick||
Phaeostroma sp. 1pustulosum|[96]|Canada.New Brunswick||
Phaeostroma sp. 1pustulosum|[97]|Canada.New Brunswick||
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Stilophora sp.|[99]|Australia.Tasmania|Chordariaceae|
Stilophora tenella|[100]|France|Chordariaceae|

BOLD TaxonID Tree

Title	: COI SPECIES DATABASE Tree
Date	: 22-April-2022
Data Type	: Nucleotide
Distance Model	: Kimura 2 Parameter
Marker	: COI-5P
Codon Positions	: 1st, 2nd, 3rd
Labels	: Extra Info, Country & Province, Family
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Sequence Count	: 101
Species count	: 2
Genus count	: 1
Family count	: 1
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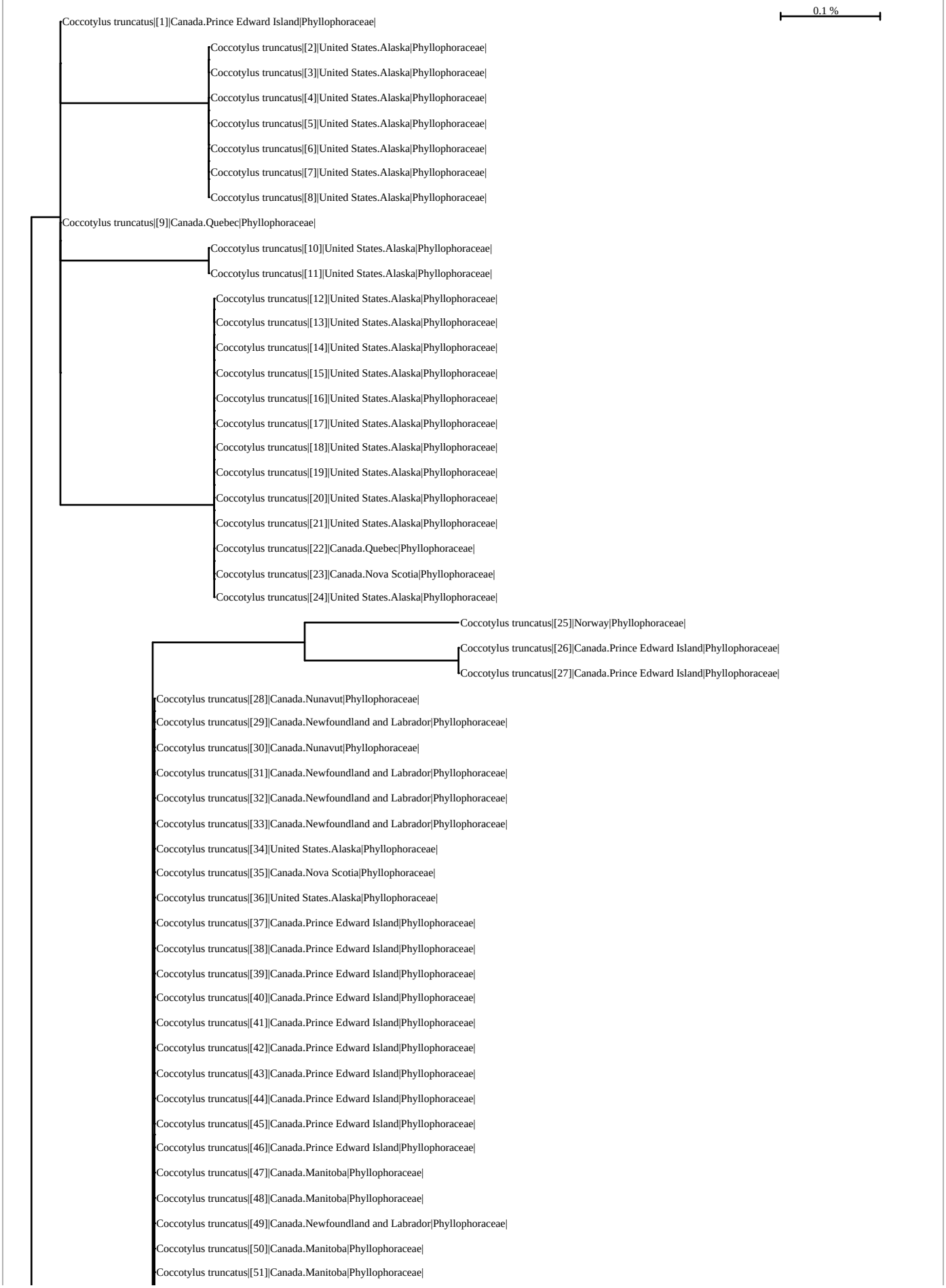
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Coccotylus truncatus|[3]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[4]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[5]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[6]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[7]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[8]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[9]|Canada.Quebec|Phyllophoraceae|
Coccotylus truncatus|[10]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[11]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[12]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[13]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[14]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[15]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[16]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[17]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[18]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[19]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[20]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[21]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[22]|Canada.Quebec|Phyllophoraceae|
Coccotylus truncatus|[23]|Canada.Nova Scotia|Phyllophoraceae|
Coccotylus truncatus|[24]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[25]|Norway|Phyllophoraceae|
Coccotylus truncatus|[26]|Canada.Prince Edward Island|Phyllophoraceae|
Coccotylus truncatus|[27]|Canada.Prince Edward Island|Phyllophoraceae|
Coccotylus truncatus|[28]|Canada.Nunavut|Phyllophoraceae|
Coccotylus truncatus|[29]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[30]|Canada.Nunavut|Phyllophoraceae|
Coccotylus truncatus|[31]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[32]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[33]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[34]|United States.Alaska|Phyllophoraceae|
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Coccotylus truncatus|[36]|United States.Alaska|Phyllophoraceae|
Coccotylus truncatus|[37]|Canada.Prince Edward Island|Phyllophoraceae|
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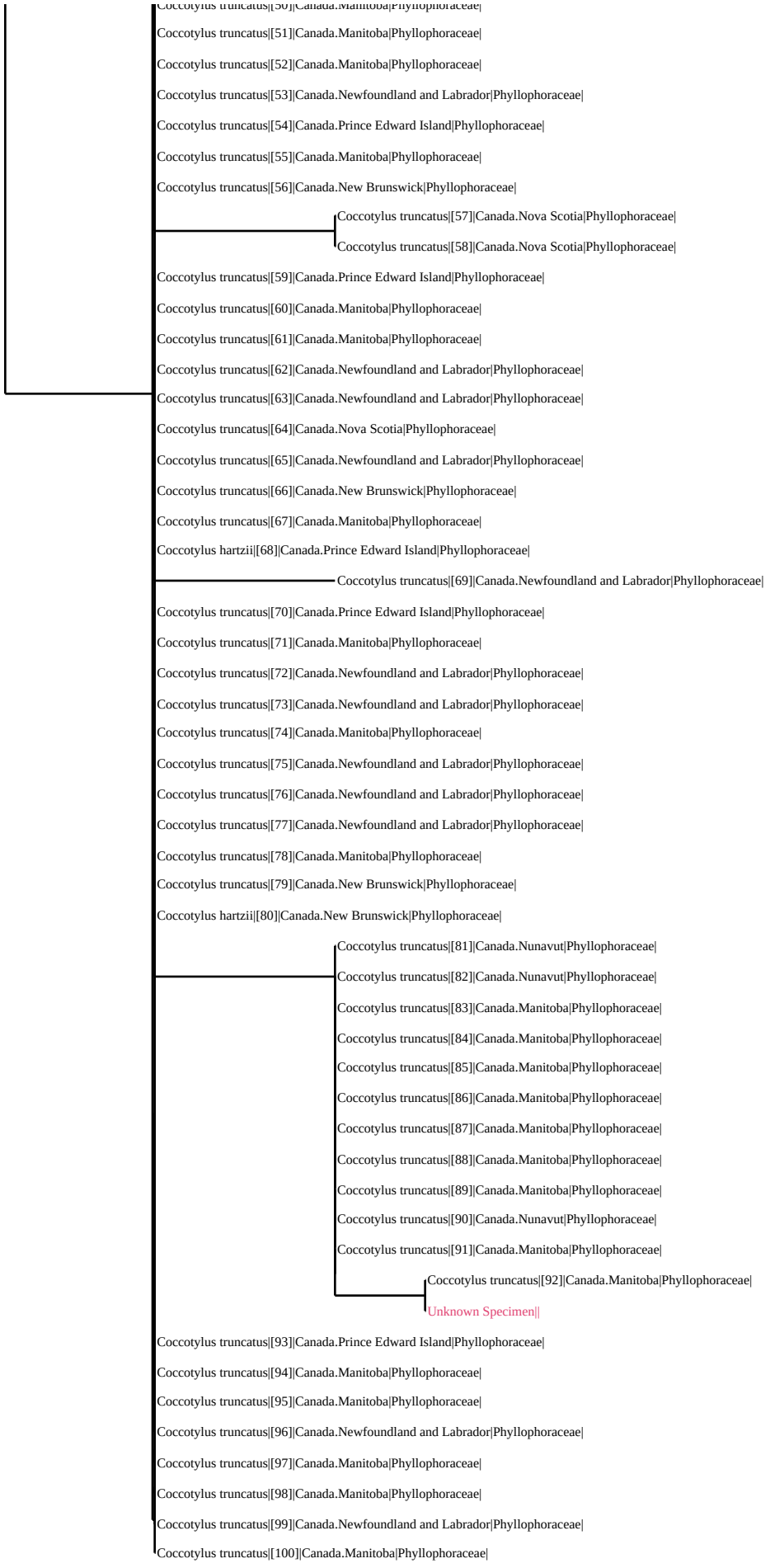
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Coccotylus truncatus|[51]|Canada.Manitoba|Phyllophoraceae|
Coccotylus truncatus|[52]|Canada.Manitoba|Phyllophoraceae|
Coccotylus truncatus|[53]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[54]|Canada.Prince Edward Island|Phyllophoraceae|
Coccotylus truncatus|[55]|Canada.Manitoba|Phyllophoraceae|
Coccotylus truncatus|[56]|Canada.New Brunswick|Phyllophoraceae|
Coccotylus truncatus|[57]|Canada.Nova Scotia|Phyllophoraceae|
Coccotylus truncatus|[58]|Canada.Nova Scotia|Phyllophoraceae|
Coccotylus truncatus|[59]|Canada.Prince Edward Island|Phyllophoraceae|
Coccotylus truncatus|[60]|Canada.Manitoba|Phyllophoraceae|
Coccotylus truncatus|[61]|Canada.Manitoba|Phyllophoraceae|
Coccotylus truncatus|[62]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[63]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[64]|Canada.Nova Scotia|Phyllophoraceae|
Coccotylus truncatus|[65]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[66]|Canada.New Brunswick|Phyllophoraceae|
Coccotylus truncatus|[67]|Canada.Manitoba|Phyllophoraceae|
Coccotylus hartzii|[68]|Canada.Prince Edward Island|Phyllophoraceae|
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Coccotylus truncatus|[72]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[73]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[74]|Canada.Manitoba|Phyllophoraceae|
Coccotylus truncatus|[75]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[76]|Canada.Newfoundland and Labrador|Phyllophoraceae|
Coccotylus truncatus|[77]|Canada.Newfoundland and Labrador|Phyllophoraceae|
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Coccotylus hartzii|[80]|Canada.New Brunswick|Phyllophoraceae|
Coccotylus truncatus|[81]|Canada.Nunavut|Phyllophoraceae|
Coccotylus truncatus|[82]|Canada.Nunavut|Phyllophoraceae|
Coccotylus truncatus|[83]|Canada.Manitoba|Phyllophoraceae|
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Coccotylus truncatus|[89]|Canada.Manitoba|Phyllophoraceae|
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Coccotylus truncatus|[91]|Canada.Manitoba|Phyllophoraceae|
Coccotylus truncatus|[92]|Canada.Manitoba|Phyllophoraceae|
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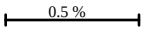
BOLD TaxonID Tree

Title	: COI SPECIES DATABASE Tree
Date	: 22-April-2022
Data Type	: Nucleotide
Distance Model	: Kimura 2 Parameter
Marker	: COI-5P
Codon Positions	: 1st, 2nd, 3rd
Labels	: Extra Info, Country & Province, Family
Filters	: Length > 200
Attachment	: Photographs & Spreadsheet

Sequence Count	: 101
Species count	: 1
Genus count	: 1
Family count	: 1
Unidentified	: 1



Unknown Specimen||

Dilsea socialis|[1]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[2]|Canada.Manitoba|Dumontiaceae|

Dilsea socialis|[3]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[4]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[5]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[6]|Canada.Nova Scotia|Dumontiaceae|

Dilsea socialis|[7]|Canada.Nova Scotia|Dumontiaceae|

Dilsea socialis|[8]|Canada.Nunavut|Dumontiaceae|

Dilsea socialis|[9]|Canada.Nunavut|Dumontiaceae|

Dilsea socialis|[10]|Canada.Nunavut|Dumontiaceae|

Dilsea socialis|[11]|Canada.Newfoundland and Labrador|Dumontiaceae|

Dilsea socialis|[12]|Canada.Newfoundland and Labrador|Dumontiaceae|

Dilsea socialis|[13]|Canada.Newfoundland and Labrador|Dumontiaceae|

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Dilsea socialis|[15]|United States.Alaska|Dumontiaceae|

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Dilsea socialis|[18]|United States.Alaska|Dumontiaceae|

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Dilsea socialis|[23]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[24]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[25]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[26]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[27]|United States.Alaska|Dumontiaceae|

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Dilsea socialis|[30]|Canada.Nova Scotia|Dumontiaceae|

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Dilsea socialis|[42]|Canada.Nova Scotia|Dumontiaceae|

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Dilsea socialis|[86]|United States.Alaska|Dumontiaceae|

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Dilsea socialis|[88]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[89]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[90]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[91]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[92]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[93]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[94]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[95]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[96]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[97]|United States.Alaska|Dumontiaceae|

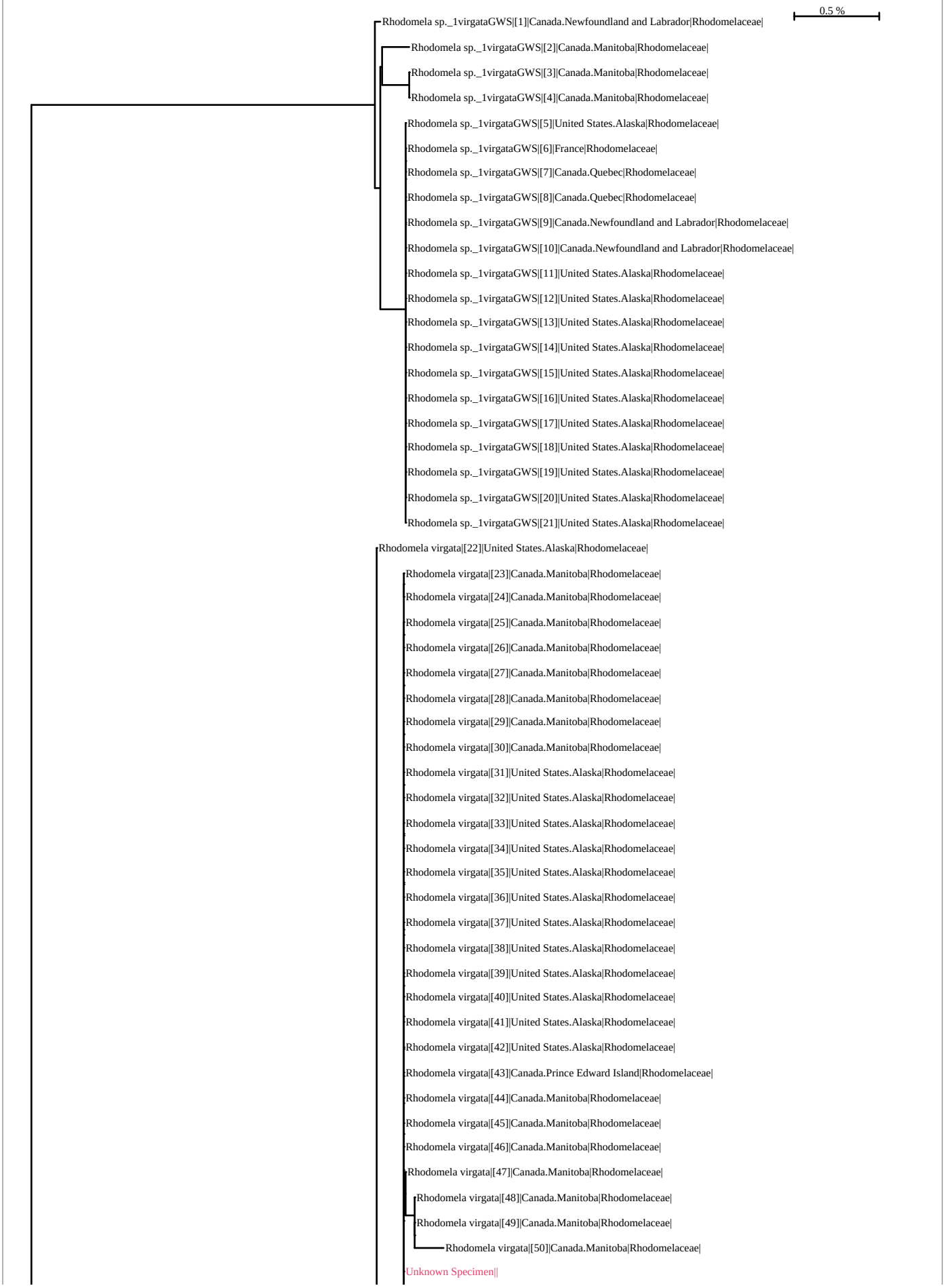
Dilsea socialis|[98]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[99]|United States.Alaska|Dumontiaceae|

Dilsea socialis|[100]|United States.Alaska|Dumontiaceae|

BOLD TaxonID Tree

Title	: COI SPECIES DATABASE Tree
Date	: 22-April-2022
Data Type	: Nucleotide
Distance Model	: Kimura 2 Parameter
Marker	: COI-5P
Codon Positions	: 1st, 2nd, 3rd
Labels	: Extra Info, Country & Province, Family
Filters	: Length > 200
Attachment	: Photographs & Spreadsheet
Sequence Count	: 101
Species count	: 2
Genus count	: 1
Family count	: 1
Unidentified	: 1


0.5 %
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Rhodomela sp._1virgataGWS|[2]|Canada.Manitoba|Rhodomelaceae|
Rhodomela sp._1virgataGWS|[3]|Canada.Manitoba|Rhodomelaceae|
Rhodomela sp._1virgataGWS|[4]|Canada.Manitoba|Rhodomelaceae|
Rhodomela sp._1virgataGWS|[5]|United States.Alaska|Rhodomelaceae|
Rhodomela sp._1virgataGWS|[6]|France|Rhodomelaceae|
Rhodomela sp._1virgataGWS|[7]|Canada.Quebec|Rhodomelaceae|
Rhodomela sp._1virgataGWS|[8]|Canada.Quebec|Rhodomelaceae|
Rhodomela sp._1virgataGWS|[9]|Canada.Newfoundland and Labrador|Rhodomelaceae|
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Rhodomela virgata|[24]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[25]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[26]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[27]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[28]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[29]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[30]|Canada.Manitoba|Rhodomelaceae|
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Rhodomela virgata|[45]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[46]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[47]|Canada.Manitoba|Rhodomelaceae|
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Unknown Specimen||


Rhodomela virgata|[50]|Canada.Manitoba|Rhodomelaceae|
Unknown Specimen||
Rhodomela virgata|[51]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[52]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[53]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[54]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[55]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[56]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[57]|Canada.Manitoba|Rhodomelaceae|
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Rhodomela virgata|[69]|United States.Alaska|Rhodomelaceae|
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Rhodomela virgata|[71]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[72]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[73]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[74]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[75]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[76]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[77]|Canada.Manitoba|Rhodomelaceae|
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Rhodomela virgata|[80]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[81]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[82]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[83]|Canada.Manitoba|Rhodomelaceae|
Rhodomela virgata|[84]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[85]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[86]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[87]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[88]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[89]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[90]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[91]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[92]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[93]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[94]|Canada.Prince Edward Island|Rhodomelaceae|
Rhodomela virgata|[95]|Canada.Nunavut|Rhodomelaceae|
Rhodomela virgata|[96]|Canada.Nunavut|Rhodomelaceae|
Rhodomela virgata|[97]|Canada.Nunavut|Rhodomelaceae|
Rhodomela virgata|[98]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[99]|United States.Alaska|Rhodomelaceae|
Rhodomela virgata|[100]|United States.Alaska|Rhodomelaceae|

APPENDIX 8E-1

Record of Independent Verifications

Original ID	2018 Samples	2018 ID Verification (Lab/Inst. Name)*	2019 Samples	2019 Sample Locations	Sent for Verification (in 2020)	2019 ID Verification (Lab/Inst. Name)	2020 Samples	2020 Sample Locations	Sent for Verification (in 2021)?	2020 ID Verification (Lab/Inst. Name)	2021 Samples	2021 Sample Locations	Sent for Verification (in 2022)	2021 ID Verification (Lab/Inst. Name)
Polydora cornuta	Yes	*Polydora* sp. (Laval)	none				None				None			
Pseudofabricia aberrans	Yes	*Pseudofabricia* sp. nr. *aberrans* (Biologica) *Manayunkia aestruania* (Laval)	yes	SNW-4, SNE-3 through SNE-5, SNE-8	Yes	*Pseudofabricia* sp. nr. *aberrans* (Biologica) *Fabricia stellaris* (Laval)	Yes	SNW-4, SNE-2, SNE-5, SNE-8 through SNE-11, SNE-13 through SNE-15	Yes	*Pseudofabricia* sp. nr. *aberrans* (Biologica) *Fabricia stellaris* (Laval)	Yes	SNW-3	Yes	Family Fabriciidae (CCDB, Columbia Science) *Pseudofabricia* sp. nr. *aberrans* (EcoAnalysts Inc.)**
Rhodine bitorquata	Yes	*Rhodine loveni* (Biologica) *Rhodine gracilior* (Laval)	yes				None				None			
Rhodine sp.	Yes		yes	BNE-8	Yes	*Rhodine* sp.	None				None			
Styelidae indet.	Yes	*Polycarpa fibrosa* (Biologica)	none				Yes		No		Yes		No	
Ammodytes sp.	Yes	*Ammodytes* sp.	none				Yes	Incidental	Yes	*Ammodytes hexapterus* (CCDB)	None			
Eteone spilotus	Yes	*Eteone* sp. (Biologica and Laval) *Eteone longa* (Potential ID from Laval)	multiple *Eteone* species		No		None				None			
Monocorophium insidosium	Yes	*Monocorophium insidosium* (Biologica) *Crassicorophium bonelli* (Laval)	none				None				None			
Monocorophium sp.	Yes	*Monocorophium sp.* (Biologica) *Crassicorophium bonelli* (Laval)	yes	SE-2, SE-4, SW-2, SW-6, SNE-7	Yes	*Crassicorophium* sp. (Laval)	None				None			
Mya arenaria *Mya truncata* *Mya* sp.	Yes	*Mya truncata* (Biologica) *Mya* sp. (Biologica) Imparientia (superorder) (Biologica)	none				None				None			
Polycarpa pomaria	Yes	*Polycarpa fibrosa* (Biologica)	none				None				None			
Marenzelleria viridis *Marenzelleria* sp.	No		yes	SE-2, SW-2,	Yes	*Marenzelleria viridis* (Laval)	Yes	SW-11 through SW-14	Yes	*Marenzelleria viridis* (Laval) *Marenzelleria wireni* , *Marenzelleria arctia*, *Marenzelleria neglecta* (Radashevsky)***	Yes (*Marenzelleria* sp.)	SW-2, SW-3, Centre M Basket	Yes	*Marenzelleria wireni* (Radashevsky)
Sosane sp. nr. *Wireni*	No		yes	SNE-6,	Yes	*Sosane wireni* (Laval)	Yes	SNW-9, SNE-10, SNE-12	Yes	*Sosane wireni* (Laval)	None			
Oncousoecia sp.	No		yes	SNE-5	Yes	Tubuliporina (Laval)	None				None			
Euphilomedes sp.	No		yes	Fish Stomachs	No	*Philomedes* sp. (Biologica)	None				None			
Nereimyra aphroditoides	Former name		yes	Archive	Yes	*Nereimyra* sp. (Biologica)	Yes		No		Yes		No	
Streptospinigera niuqtuut	Former name		yes	Archive	Yes	*Streptospinigera niuqtuut* (Biologica)	Yes		No		None			
Harmothoe propinqua	No		none				Yes	SW-6	Yes	*Harmothoe extenuata* (Laval)	None			
Harmothoe viridis	No		none				Yes	SE-11	Yes	*Harmothoe imbricata* (Biologica and Laval)	None			
Hesperonoe sp.	No		none				Yes	SNE-7	Yes	*Hesperonoe* sp. (Biologica) *Bylgides* sp. (Laval)	None			
Ampharete petersenae	No		none				Yes	SW-3, SW-7, SW-10, SW-11, SW-13 through SW-15, SE-5 through SE-13, SE-15, SNW-7	Yes	*Ampharete petersenae* (Laval)	Yes	SE-1, SE-3, SW-4	Yes	Pending
Paramphitrite birulai	No		none				Yes	SW-8, SW-10	Yes	*Amphitrite birulai* (Laval)	Yes	SE-1	Yes	Pending
Crassicorophium sp.	No		none				None				Yes	SE-3, Centre S Basket 1, Centre M Basket 1	Yes	Inconclusive/ Corophiidae indet. (CCDB) *Crassicorophium clarencense* (Friday Harbor)
Diastyloides biplicatus	No		none				None				Yes	SW-4	Yes	*Diastylis* sp. (Laval)
Tricellaria sp.	No		none				None				Yes	SNE-2	Yes	Candidae indet. (Laval)

Note: Grey cells indicate no action (i.e., no specimen in samples, therefore none sent for verification)

* Biologica: Biologica Environmental Services; Laval: The Benthic Ecology Lab at Université Laval; CCDB: Canadian Centre for DNA Barcoding at the University of Guelph, Radashevsky: Dr. Vasily Radashevsky of the Russian National Scientific Center of Marine Biology; Friday Harbor: Dr. Craig Staude at Friday Harbour Laboratories at the University of Washington

**EcoAnalysts and Columbia Science examined specimens from 2018 and 2019 collections

*** Radashevsky examined specimens from 2017-2020, no specimens matched *M. viridis* , at least one specimen was conclusively identified as *M. wireni* , a high probability of *M. arctia* was given for specimens from Phillips Creek, other specimens were a high probability of *M. wireni* and/or *M. neglecta*

APPENDIX 8F-1

Record of New and Flagged Taxa Risk Status

Appendix 8F-1

Record of New and Flagged Taxa Risk Status

Phylum Class/Order	Family	Subfamily	Taxa	Project Component	Flagged for Verification	Results of Independent Verification	Risk Category	Watchlist or Trigger List?	Distribution References
Annelida									
Clitellata/Haplotaxida	Naididae	-	Naididae indet.	Benthic Infauna	No	N/A	No Risk	N/A	1, 2, 3, 4
Polychaeta/Eunicida	Lumbrineridae	-	*Lumbrineris fauchaldi*	Benthic Infauna	No	N/A	No Risk	N/A	1, 11
Polychaeta/Sabellida	Fabriciidae	-	*Pseudofabricia* sp. nr.*aberrans*	Benthic Infauna, DNA Samples	Flagged (on Watchlist)	Inconclusive	No Risk	N/A	18
Polychaeta/Spionida	Spionidae	-	*Marenzelleria* sp.	Benthic Infauna, Settlement Substrates, DNA Samples	Flagged (on Watchlist)	*Marenzelleria wireni*	No Risk**	N/A**	1, 2, 19
Polychaeta/Terebellida	Ampharetidae	Ampharetinae	*Ampharete petersenae*	Benthic Infauna	Flagged (on Watchlist)	TBD	No Risk	N/A	1, 20, 21
Polychaeta/Terebellida	Terebellidae		*Paramphitrite birulai*	Benthic Infauna	Flagged (on Watchlist)	TBD	Low Risk	Watchlist	-
Arthropoda									
Insecta/Diptera	Chironomidae	-	*Hydrobaenus* sp.	Fish Stomachs	No	N/A	No Risk	N/A	2
Insecta/Diptera	Simuliidae	-	Simuliidae indet.	Fish Stomachs	No	N/A	No Risk	N/A	2, 10
Insecta/Diptera	Tipulidae	-	Tipulidae indet.	Fish Stomachs	No	N/A	No Risk	N/A	2, 10
Insecta/Ephemeroptera	-	-	Ephemeroptera indet.	Fish Stomachs	No	N/A	No Risk	N/A	2, 10
Malacostraca/Amphipoda	Corophiidae	Corophiinae	*Crassicorophium bonelli*	DNA Samples	Flagged (on Watchlist)	Inconclusive	Low Risk	Watchlist	-
Malacostraca/Amphipoda	Corophiidae	Corophiinae	*Crassicorophium* sp.	Benthic Infauna, Settlement Substrates	Flagged (on Watchlist)	TBD	Low Risk	Watchlist	1, 2, 6, 8
Malacostraca/Amphipoda	Tryphosidae	-	*Hippomedon propinqvus*	Benthic Infauna	No	N/A	No Risk	N/A	1, 2, 3, 5, 6
Malacostraca/Cumacea	Diastylidae	-	*Diastyloides biplicatus*	Benthic Infauna	QA/QC	*Diastylis* sp.*	No Risk	N/A	1, 2
Brachiopoda									
-/-	-	-	Brachiopoda indet.	Benthic Infauna, Freight Dock Offset Habitat	No	N/A	No Risk	N/A	1, 2, 6, 7, 8, 9, 10
Bryozoa									
Gymnolaemata/Cheilostomatida	-	-	Schizoporelloidea indet.	Benthic Infauna	No	N/A	No Risk	N/A	1, 8, 10
Gymnolaemata/Cheilostomatida	Bitectiporidae	-	*Schizomavella* sp.	Benthic Infauna	No	N/A	No Risk	N/A	2
Gymnolaemata/Cheilostomatida	Calloporidae	-	*Callopora* sp.	Benthic Infauna	No	N/A	No Risk	N/A	1, 2, 8
Gymnolaemata/Cheilostomatida	Calloporidae	-	*Cauloramphus* sp.	Benthic Infauna	No	N/A	No Risk	N/A	1, 2, 8
Gymnolaemata/Cheilostomatida	Candidae	-	*Tricellaria* sp.	Benthic Infauna	Yes	Candidae indet.	No Risk	N/A	2
Gymnolaemata/Cheilostomatida	Cribrilinidae	-	*Cribrilina* sp.	Benthic Infauna	No	N/A	No Risk	N/A	1, 2, 6, 8
Gymnolaemata/Cheilostomatida	Exochellidae	-	*Escharoides* sp.	Benthic Infauna	No	N/A	No Risk	N/A	1, 2, 8
Gymnolaemata/Cheilostomatida	Fatkullinidae	-	*Stomacrustula pachystega*	Benthic Infauna	No	N/A	No Risk	N/A	1
Gymnolaemata/Cheilostomatida	Smittinidae	-	*Pseudoflustra* sp.	Benthic Infauna	No	N/A	No Risk	N/A	1, 2
Gymnolaemata/Cheilostomatida	Smittinidae	-	*Smittina* sp.	Benthic Infauna	No	N/A	No Risk	N/A	1, 2, 6
Stenolaemata/Cyclostomatida	Lichenoporidae	-	*Lichenopora* sp.	Settlement Substrates	No	N/A	No Risk	N/A	1, 2, 6, 8
Chlorophyta									
Ulvophyceae/Acrosiphoniales	Acrosiphoniaceae	-	*Spongomorpha aeruginosa*	Settlement Substrates	No	N/A	No Risk	N/A	1, 2, 12, 13
Ulvophyceae/Cladophorales	Cladophoraceae	-	*Chaetomorpha melagonium*	Quadrat Surveys	No	N/A	No Risk	N/A	1, 2, 12, 14
Ulvophyceae/Cladophorales	Cladophoraceae	-	*Rhizoclonium* cf. *riparium*	Quadrat Surveys	No	N/A	No Risk	N/A	1, 2, 12, 13
Ulvophyceae/Cladophorales	Cladophoraceae	-	*Rhizoclonium* sp.	Settlement Substrates	No	N/A	No Risk	N/A	2, 12, 13
Ulvophyceae/Ulotrichales	Ulotrichaceae	-	*Urospora neglecta*	Freight Dock Habitat Offset Monitoring	No	N/A	No Risk	N/A	12, 15
Ulvophyceae/Ulotrichales	Ulotrichaceae	-	*Ulothrix* sp.	Settlement Substrates	No	N/A	No Risk	N/A	2, 12, 13
Ulvophyceae/Ulotrichales	Ulotrichaceae	-	Ulotrichaceae indet.	Settlement Substrates	No	N/A	No Risk	N/A	1, 2, 12, 13
Ulvophyceae/Ulvales	Ulvaceae	-	*Ulva* cf. *prolifera*	Settlement Substrates	No	N/A	No Risk	N/A	1, 2, 12, 13
Chordata									
Actinopterygii/Perciformes	Agonidae	Agoninae	*Leptagonus decagonus*	Incidentals	No	N/A	No Risk	N/A	1, 2, 6, 9, 10, 16
Actinopterygii/Perciformes	Agonidae	Anoplagoninae	*Aspidophoroides olrikii*	Incidentals	No	N/A	No Risk	N/A	1, 2, 6, 9, 10, 16
Actinopterygii/Perciformes	Cottidae	-	*Triglops pingelii*	Incidentals	No	N/A	No Risk	N/A	1, 2, 6, 9, 10, 16
Actinopterygii/Perciformes	Cyclopteridae	-	*Eumicrotremus spinosus*	Freight Dock Habitat Offset Monitoring	No	N/A	No Risk	N/A	1, 2, 6, 9, 16
Ciliophora									
-/-	-	-	Ciliophora indet.	Settlement Substrates	No	N/A	No Risk	N/A	1, 2, 10
Cnidaria									
Hydrozoa/Anthoathecata	Corynidae	-	*Sarsia* sp.	Settlement Substrates	No	N/A	No Risk	N/A	1, 2, 6, 10
Hydrozoa/Leptothecata	Campanulinidae	-	*Calycella* sp.	Benthic Infauna	No	N/A	No Risk	N/A	1, 2
Echinodermata									
Asteroidea/Forcipulatida	Asteriidae	-	*Leptasterias* (*Leptasterias*) *muelleri*	Settlement Substrates	No	N/A	No Risk	N/A	1, 2
Foraminifera									
-/-	-	-	Foraminifera indet.	Settlement Substrates	No	N/A	No Risk	N/A	1, 2, 8, 10, 17
Mollusca									
Bivalvia/Galeommatida	Lasaeidae	-	Lasaeidae indet.	Benthic Infauna	No	N/A	No Risk	N/A	1, 2, 3
Bivalvia/Mytilida	Mytilidae	Crenellinae	*Arvella faba*	Settlement Substrates	No	N/A	No Risk	N/A	1, 2, 3, 6
Gastropoda/Nudibranchia	Dendronotidae	-	*Dendronotus* sp.	Settlement Substrates	No	N/A	No Risk	N/A	1, 2, 6, 10
Ochrophyta									
Phaeophyceae/Desmarestiales	Desmarestiaceae	-	*Desmarestia aculeata*	Quadrat Surveys	No	N/A	No Risk	N/A	1, 2, 12, 14
Phaeophyceae/Desmarestiales	Desmarestiaceae	-	*Desmarestia viridis*	Quadrat Surveys	No	N/A	No Risk	N/A	1, 2, 12, 13
Phaeophyceae/Ectocarpales	Acinetosporaceae	-	*Pylaiella* cf. *varia*	Quadrat Surveys, Settlement Substrates	No	N/A	No Risk	N/A	13
Phaeophyceae/Ectocarpales	Chordariaceae	-	cf. *Coelocladia arctica*	Quadrat Surveys	No	N/A	No Risk	N/A	2, 12
Phaeophyceae/Ectocarpales	Chordariaceae	-	cf. *Dictyosiphon ekmanii*	Quadrat Surveys	No	N/A	No Risk	N/A	13
Phaeophyceae/Ectocarpales	Chordariaceae	-	cf. *Trachynema groenlandicum*	Quadrat Surveys, Settlement Substrates	No	N/A	No Risk	N/A	13
Phaeophyceae/Ectocarpales	Chordariaceae	-	Chordariaceae indet.	Settlement Substrates	No	N/A	No Risk	N/A	2, 12, 13
Phaeophyceae/Ectocarpales	Chordariaceae	-	*Dictyosiphon foeniculaceus*	Quadrat Surveys	No	N/A	No Risk	N/A	2, 12, 14
Phaeophyceae/Ectocarpales	Scytosiphonaceae	-	cf. *Petalonia* sp.	Quadrat Surveys	No	N/A	No Risk	N/A	1, 2, 12, 15
Rhodophyta									
Florideophyceae/Ceramiales	Delesseriaceae	Phycodryoideae	*Phycodrys fimbriata*	Quadrat Surveys	No	N/A	No Risk	N/A	1, 2, 24
Florideophyceae/Ceramiales	Rhodomelaceae	-	*Rhodomela virgata*	Quadrat Surveys	No	N/A	No Risk	N/A	1, 2, 24
Florideophyceae/Ceramiales	Rhodomelaceae	-	*Savoiea arctica*	Quadrat Surveys	No	N/A	No Risk	N/A	1, 2, 24
Florideophyceae/Gigartinales	Dumontiaceae	-	*Dilsea socialis*	Quadrat Surveys	No	N/A	No Risk	N/A	1, 2, 24
Florideophyceae/Gigartinales	Phyllophoraceae	-	*Coccotylus truncatus*	Quadrat Surveys	No	N/A	No Risk	N/A	1, 2, 24

Notes: Taxa identified to the lowest practical taxonomic level; indet.= indeterminate (taxa which could not be identified beyond the taxonomic level listed); sp.=species.

Taxa distribution references: 1: WoRMS 2022, 2: GBIF 2022, 3: Cusson 2018, 4: Gagnon and Torgersen 2021, 5: Hopcroft 2019, 6: Miller et al. 2014, 7: Sejr 2009, 8. Goldsmit 2016, 9: DFO 2019, 10: Stewart 2013, 11: Blake 1972, 12: Kupper et al. 2016, 13: Algaebase 2022, 14: Ellis and Wilce 1961, 15: Brown et al. 2011, 16: Coad and Reist 2018, 17: Stewart et al. 1985, 18: MacDonald 2022b, Pers. Comm., 19: Radashevsky 2022, Pers. Comm., 20: Jirkov 1997, 21: Parapar et al. 2021.

All taxa cross-referenced with NIS/AIS resources: Fofonoff et al. 2022, ISSG 2022, Rius et al. 2022, Molnar et al. 2008, Casas-Monroy et al. 2014.

*_Diastylis_ and _Diastyloides_ are morphologically similar and indentification results may vary depending on the specific key used.

**Note that this risk status is for _Marenzelleria wireni_ specifically, _Marenzelleria_ sp. other than _M. wireni_ and _M. arctia_ remain on the program watchlist as High Risk taxa

APPENDIX 8F-2

Program Watchlist

Appendix 8F-2

Program Watchlist

Phylum Class/Order	Family	Subfamily	Taxa	Risk Category	Year Added	Year Removed
Polychaeta/Phyllodocida	Polynoidae	Polynoinae	*Hesperonoe* sp.	Low Risk	2020	N/A
Polychaeta/Sabellida	Fabriciidae		*Pseudofabricia* sp. nr. *aberrans*	Low Risk	2018	2021
Polychaeta/Spionida	Spionidae		*Marenzelleria viridis* (*Marenzelleria* sp.)*	High Risk	2019	N/A
Polychaeta/Terebellida	Ampharetidae	Ampharetinae	*Ampharete petersenae*	Low Risk	2020	2021
Polychaeta/Terebellida	Ampharetidae	Ampharetinae	*Sosane wireni*	Low Risk	2019	N/A
Polychaeta/Terebellida	Terebellidae		*Amphitrite birulai/Paramphitrite birulai*	Low Risk	2020	N/A
Malacostraca/Amphipoda	Corophiidae	Corophiinae	*Crassicorophium* sp.	Low Risk	2018**	N/A
Malacostraca/Amphipoda	Corophiidae	Corophiinae	*Monocorophium* sp.	High Risk	2018**	N/A
Actinopterygii/Perciformes	Ammodytidae		*Ammodytes hexapterus*	Low Risk	2020	N/A

**Marenzelleria viridis* and *Marenzelleria* species, other than *M. wireni* and *M. arctia*

** *Monocorophium* and *Crassicorophium* sp. were previously identified during baseline surveys, but flagged for review in 2018

APPENDIX 8F-3

Nunavut High Risk AIS

Non-Native & Invasive species *In Nunavut*

In 2010 the Canadian Endangered Species Conservation Council (CESCC) identified 17 species not normally found in Nunavut.

These are called "non-native species". Some of these plants and animals can become an "invasive species", which represents a potential major concern for the future health of the Arctic.

What is a non-native species?

A non-native species is defined as an organism that is not normally found in a region. They are introduced by human activities, which can be intentional (e.g. species introduced to control a pest species), accidental (e.g. shipping and ballast water exchange), or environmental (e.g. changes in climate leading to wildlife movements). An example of a non-native species in Nunavut is the European Starling *(Sturnus vulgaris)*, which was introduced to North America from Europe intentionally by humans.

What is an invasive species?

Not all non-native species are considered invasive. This term is reserved for species that do so well in their new habitat that they end up causing harm to the environment, other species, human health, or economic activity (ISAC, 2006). An example of an invasive species in southern Canada is the Zebra Mussel *(Dreissena polymorpha)*, which was introduced to North America by ships releasing their ballast water. The Zebra mussel reproduces quickly and establishes large colonies on any hard surface. In this way they take over habitat occupied by native species, reducing the availability of food for other species, and also attaching themselves in great numbers to boats and other infrastructure in the water. (Benson and Raikow, 2010).

Scott 2011

Species: Field Sow Thistle *(Sonchus arvensis)*

Impact: The Field Sow Thistle grows quickly, easily and when there are many of them they can reduce the water resources available to other plants. They have the potential to decrease native plant diversity by competing for space and water.

Introduction pathway: Accidently introduced from Europe into North America in a containment of agricultural crop seed. This plant has been able to spread long distances across Canada because the seeds can travel far in the wind.

Sohl 2005

Species: The European Starling *(Sturnus vulgaris)*

Impact: The European Starling can displace native bird species by taking over nesting sites and competing for food.

Introduction pathway: Introduced intentionally to North America from Europe. These birds then dispersed naturally into Canada through migration.

Why should you be concerned about invasive species?

When invasive species are introduced and survive, their populations can increase rapidly because there are no natural predators. Invasive species may feed on native species, compete for food and space, as well as expose native species to new parasites and disease. Invasive species are now widely recognized as a leading cause of endangerment and/or extinction of native species (Lassuy and Lewis, 2010).

** There are currently no known species in Nunavut that can be classified as aquatic or terrestrial invasive species.*

How can you help?

Report

Have you seen a different plant, animal or insect in Nunavut?

Everything you can do to help us identify these species is important. Report the **location** where you observed the species (GPS Coordinates are very helpful) and provide a **detailed description** of the plant, animal, or insect. If possible **take a photo**.

Remember that not all non-native species are considered invasive. If you see an unknown plant or animal, it is very important to report it.

Do not take any extreme actions; the first step is reporting the species so that territorial and federal agencies can respond appropriately. We will report our findings back to you and information about the species you have observed.

Share

Keep yourself informed and educate others about non-native and invasive species. Let them know what to do if they see an unknown or uncommon species.

This project was undertaken with the financial support of:

Environment Canada

Environnement Canada

Report a species to your local Conservation Officer.

For More Information or if your CO is not available please contact:

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Please call 867-975-7706 to request a French copy of this brochure.

How might invasive species get into Nunavut?

Species are transported throughout the world by human activities, like shipping, which allows species to move further distances and over barriers that they could not do on their own. Nunavut remains very remote compared to the rest of Canada and so the lack of major road systems, infrequent shipping and cold climate has limited their introduction and survival.

However, as climate change alters Arctic ecosystems, it creates conditions that are more favorable to the survival and reproduction of non-native species. It also enables greater human activity and development, which gives potential invasive species more opportunities to establish themselves. (Lassuy and Lewis, 2010).

Pathways of introduction for invasive species into Nunavut

* Ballast water exchange and hull fouling have the greatest potential for introducing invasive species into the aquatic ecosystems of Nunavut. Ballast water is used to stabilize ships. It is pumped aboard ships from different ports around the world and often exchanged far from the region it was obtained. This water can contain species that are not native, and may establish themselves locally.

Hull fouling occurs when organisms attach themselves to the outside of a ship's hull where they can then be transported around the world.

MacGregor, 2009

* Seeds, insects and even small mammals can be transported around the world through the shipping of grocery produce, lumber, construction supplies, and packing materials, even dirt from someone's footwear can contain plant seeds (IASC, 2010).

* As climate continues to change in the Arctic, many terrestrial and aquatic plants and animals will move further north looking for the food and habitat they desire. These wildlife movements are not a threat when it comes to invasive species, but it is important to note that some species, (especially rare or threatened ones) may not survive the transition. Others may do well, like flying insects, which are already increasing in number in some areas of Nunavut. (IASC, 2010).

Wildlife movements are often referred to as "range extensions" where a species expands the area they can live in when the habitat and climate is favorable for them.

The Migratory Grasshopper (Melanoplus sanguinipes) is a winged insect that is widely distributed across Canada and is one example of a species that may expand its range into Nunavut.

Non-Native Species in Nunavut

As of 2011, there are 17 species known to be non-native in Nunavut, these are listed below and are all terrestrial species. Please note that it is not currently known what the potential is for any of these species to become invasive and to what extent. Two species, the starling and the sow thistle are described in more detail below.

SCIENTIFIC NAME	COMMON NAME	ORGANISM TYPE
Carum carvi	Wild Caraway	Flowering Plant
Taraxacum officinale	Common Dandelion	Flowering Plant
Sonchus arvensis	Field Sow Thistle	Flowering Plant
Leucanthemum vulgare	Oxeye Daisy	Flowering Plant
Thlaspi arvense	Field Pennycress	Flowering Plant
Capsella bursa-pastoris	Shepherd's Purse	Flowering Plant
Barbarea vulgaris	Yellow Rocket	Flowering Plant
Amaranthus retroflexus	Green Amaranth	Flowering Plant
Hordeum vulgare	Common Barley	Flowering Plant
Puccinellia distans	Spreading Alkali Grass	Flowering Plant
Vicia cracca	Tufted Vetch	Flowering Plant
Papaver somniferum	Opium Poppy	Flowering Plant
Plantago major	Common Plantain	Flowering Plant
Polygonum aviculare	Prostrate Knotweed	Flowering Plant
Pieris rapae	Cabbage White	Butterfly
Sturnus vulgaris	European Starling	Passerine Bird
Passer domesticus	House Sparrow	Passerine Bird

*Species photo references available upon request. Images are not to scale.

Potential Invasive Species in Nunavut

As trade and shipping continues to increase, some aquatic invasive species known to commonly foul ship hulls and ballast waters, like the Chinese Mitten Crab, are more likely to arrive at ports around Nunavut.

A recent report commissioned by Fisheries and Oceans Canada identified a number of potential aquatic invasive species, mainly for the Hudson Bay region. The table below lists only those species considered as "High Risk" to Nunavut and they are found in freshwater & marine environments.

SCIENTIFIC NAME	COMMON NAME	ORGANISM TYPE
Osmerus mordax	Rainbow Smelt	Fish
Gymnocephalus cernuus	Ruffe	Fish
Caprella mutica	Skeleton Shrimp	Crustacean
Chelicorophium curvispinum	Data unavailable	Crustacean
Dikerogammarus villosus	Killer Shrimp	Crustacean
Gmelinoides fasciatus	Data unavailable	Crustacean
Pontogammarus robustoides	Data unavailable	Crustacean
Eriocheir sinensis	Chinese Mitten Crab	Crustacean
Hemimysis anomala	Data unavailable	Crustacean
Balanus improvisus	Acorn Barnacle	Crustacean
Corbicula fluminea	Asian Clam	Mollusc
Dreissena bugensi	Quagga Mussel	Mollusc
Bythotrephes longimanus	Spiny Water Flea	Zooplankton
Cercopagis pengo	Fishhook Water Flea	Zooplankton
Eubosmina maritima	Data unavailable	Zooplankton
Marenzelleria cf. viridis	Data unavailable	Worm
Marenzelleria cf. wireni	Data unavailable	Worm
Cordylophora caspia	Freshwater Hydroid	Hydrozoa
Coscinodiscus wailesii	Data unavailable	Phytoplankton
Odontella sinensi	Data unavailable	Phytoplankton
Prorocentrum minimum	Data unavailable	Phytoplankton
Codium fragile ssp. tomentosoides	Oyster Thief	Algae
Glugea hertwigi	Data unavailable	Protozoa
Amphilina foliacea	Data unavailable	Parasite

*Species photo references available upon request. Images are not to scale.

Nunavut

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