Coastal Biodiversity Survey (PAC2024-042) in the Kitkatla Inlet Marine Conservation Targets Area: 2024 Cruise Report

Carolyn K. Robb, Michelle Paleczny, Michelle Bigg, Lily Burke, Sarah Davies, Sarah Dudas, Cole Fields, Kayleigh Gillespie, Vanessa Hodes, Joanne Lessard, Beatrice Proudfoot, Emily M. Rubidge, Shannon Schmunk, Kristen Westfall, Nicola Houtman, and Tammy Norgard

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2026

COASTAL BIODIVERSITY SURVEY (PAC2024-042) IN THE KITKATLA INLET MARINE CONSERVATION TARGETS AREA: 2024 CRUISE REPORT

by

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Abstract

Robb, C.K., Paleczny, M., Bigg, M., Burke, L., Davies, S., Dudas, S., Fields, C., Gillespie, K., Hodes, V., Lessard, J., Proudfoot, B., Rubidge, E.M., Schmunk, S., Westfall, K., Houtman, N., and Norgard, T. 2026. Coastal Biodiversity Survey (PAC2024-042) in the Kitkatla Inlet Marine Conservation Targets Area: 2024 Cruise Report. Can. Tech. Rep. Fish. Aquat. Sci. 3757: xi + 177 p. https://doi.org/10.60825/fhdh-a362

From May 14th – June 1st, 2024, Fisheries and Oceans Canada aboard the Canadian Coast Guard Ship *Vector* partnered with the Gitxaała Nation to conduct a coastal biodiversity survey (PAC2024-042) to characterize intertidal and subtidal biodiversity in Kitkatla Inlet on British Columbia's North coast. This site was identified for protection as part of the Great Bear Sea Marine Protected Area Network in the Northern Shelf Bioregion. Seven nearshore sites were surveyed using a suite of techniques: SCUBA dives, beach seining, drone surveys, environmental DNA (eDNA), wildlife cameras, infauna/epifauna surveys, shoreline debris surveys, and baited remoted underwater video (BRUV) surveys. Each technique detected a unique suite of species, highlighting the complementary nature of the sampling plan. Across all nearshore sites, 104 invertebrate taxa were detected by dive surveys, 57 invertebrate taxa by intertidal biodiversity surveys; 31 fish and 26 invertebrate taxa by BRUVs; and 23 fish and 13 invertebrate taxa by beach seining. BRUV and eDNA surveys were also conducted inside and outside of the Goschen Rockfish Conservation Area (RCA), and water collection for eDNA and microplastics assessments were completed throughout the area. The baseline information collected during this survey will support marine conservation and planning initiatives and contribute to long-term monitoring of these areas.

Résumé

Robb, C.K., Paleczny, M., Bigg, M., Burke, L., Davies, S., Dudas, S., Fields, C., Gillespie, K., Hodes, V., Lessard, J., Proudfoot, B., Rubidge, E.M., Schmunk, S., Westfall, K., Houtman, N., and Norgard, T. 2026. Coastal Biodiversity Survey (PAC2024-042) in the Kitkatla Inlet Marine Conservation Targets Area: 2024 Cruise Report. Can. Tech. Rep. Fish. Aquat. Sci. 3757: xi + 177 p. https://doi.org/10.60825/fhdh-a362

Du 14 mai au 1er juin 2024, des employés de Pêches et Océans Canada, à bord du navire de la Garde côtière canadienne *Vector*, se sont associés à la Nation Gitxaała pour mener un relevé de la biodiversité côtière (PAC2024-042) visant à caractériser la biodiversité des eaux intertidales et subtidales du bras de mer Kitkatla, situé sur la côte nord de la Colombie-Britannique. Cette zone a été ciblée aux fins de protection, dans le cadre du réseau d'aires marines protégées de la mer Great Bear dans la biorégion du plateau Nord. Sept sites côtiers ont fait l'objet de relevés réalisés au moyen de diverses techniques : des relevés menés avec un appareil respiratoire autonome de plongée, des relevés à la senne de plage, des relevés par drone, des relevés de l'ADN environnemental (ADNe), des relevés réalisés au moyen de caméras de surveillance de la faune, des relevés de l'endofaune et de l'épifaune, des relevés des débris côtiers et des relevés réalisés au moyen d'un système vidéo sous-marin contrôlé à distance et appâté. Chaque technique a permis la détection d'une variété d'espèces uniques, ce qui a mis en lumière la nature complémentaire du plan d'échantillonnage. À l'échelle des sites côtiers, 104 taxons d'invertébrés ont été détectés au moyen des relevés de plongée; 57 taxons d'invertébrés ont été détectés au moyen des relevés de la biodiversité en eaux intertidales; 31 taxons de poissons et 26 taxons d'invertébrés ont été détectés au moyen des relevés par système vidéo sous-marin contrôlé à distance et appâté; et 23 taxons de poissons et 13 taxons d'invertébrés ont été détectés au moyen de relevés à la senne de plage. Des relevés réalisés au moyen d'un système vidéo sous-marin contrôlé à distance et appâté, et des relevés de l'ADNe ont aussi été menés à l'intérieur et à l'extérieur de l'aire de conservation des sébastes de l'île Goschen, et des activités de collecte d'échantillons d'eau aux fins d'évaluation de l'ADNe et des microplastiques ont été effectuées dans toute la région. Les données de référence recueillies dans le cadre du relevé soutiendront des initiatives de planification et de conservation marines, et contribueront à la surveillance à long terme des zones ciblées.

Introduction

The coastal biodiversity survey (PAC2024-042) took place from May 14th to June 1st, 2024, aboard the Canadian Coast Guard Ship (CCGS) Vector with science crew from Fisheries and Oceans Canada (DFO) and the Gitxaała Nation. The collaborative survey facilitated the sharing of ecological knowledge and survey methods between the DFO and Gitxaała Nation Guardian team. The group worked to collectively assess intertidal and subtidal habitats and species within the Kitkatla Inlet Network Zones (Figure 1). The Kitkatla Inlet Network Zones were identified by Indigenous, federal, and provincial partners as a proposed *Oceans Act* MPA in the Great Bear Sea Marine Protected Area (MPA) Network in the Northern Shelf Bioregion (NSB; MPA Network BC Northern Shelf Initiative 2023).

The Kitkatla Inlet Network Zones include Zones 330-333 identified in the Network Action Plan (MPA Network BC Northern Shelf Initiative 2023) and have a range of proposed ecological conservation objectives, including the conservation of rockfish, Northern Abalone, species assemblages associated with canopy-forming kelp and eelgrass beds, Pacific Herring spawning habitat, Pacific Sand Lance habitat, and estuaries important for Pacific salmon. The overall biodiversity and cultural importance of the species make the area critically important to the Gitxaała Nation (MPA Network BC Northern Shelf Initiative 2023).

The cruise was divided into two legs of approximately one week each (May 14-21, May 21-31), with a crew change in Prince Rupert midway through the survey (Table 1, Figure 2, Figure 3). Survey activities on leg one included eDNA surveys, dive (SCUBA) surveys, wildlife camera installations, and microplastic surveys. Survey activities on the second leg included coastal biodiversity surveys, drone surveys of beaches, rapid biodiversity surveys, sand samples for eDNA of beach-spawning forage fish, eelgrass beach seine and eDNA surveys, and baited remote underwater video (BRUV) surveys. Each survey technique detected a unique suite of species, highlighting the complementary nature of the sampling plan, and the additional information collected provides the opportunity to validate the data collected through each individual survey methods.

Much of the survey work was conducted in zones 330 (along the coast of Banks Island) and 331 (in Kitkatla Inlet). In addition, subtidal surveys were conducted inside and outside of the Goschen RCA, which aligns with zone 333 of Kitkatla Inlet Network Zones (Figure 1), and further water sampling for microplastics was conducted along the ship's transit back to DFO's Pacific Biological Station in Nanaimo. The surveys were completed to assess habitats and species within the Kitkatla Inlet Network Zone. Together with information collected during previous surveys at other sites within the Great Bear Sea MPA network in the NSB (Proudfoot et al. 2025a,b,c), baseline data collected during the survey was intended to help support marine conservation initiatives and contribute to long term monitoring of the MPA network.

Similar to the cruise reports from previous years of the Coastal Biodiversity Surveys, this report is separated into sections focused on the nearshore biodiversity surveys and ship-based water sampling and outlines the goals, methodology, and preliminary results from the various survey techniques. Within the nearshore biodiversity surveys section, site summaries are included that provide a general description of each area and summarize the complementary information that was collected using the different survey techniques, highlighting the species observed using each approach.

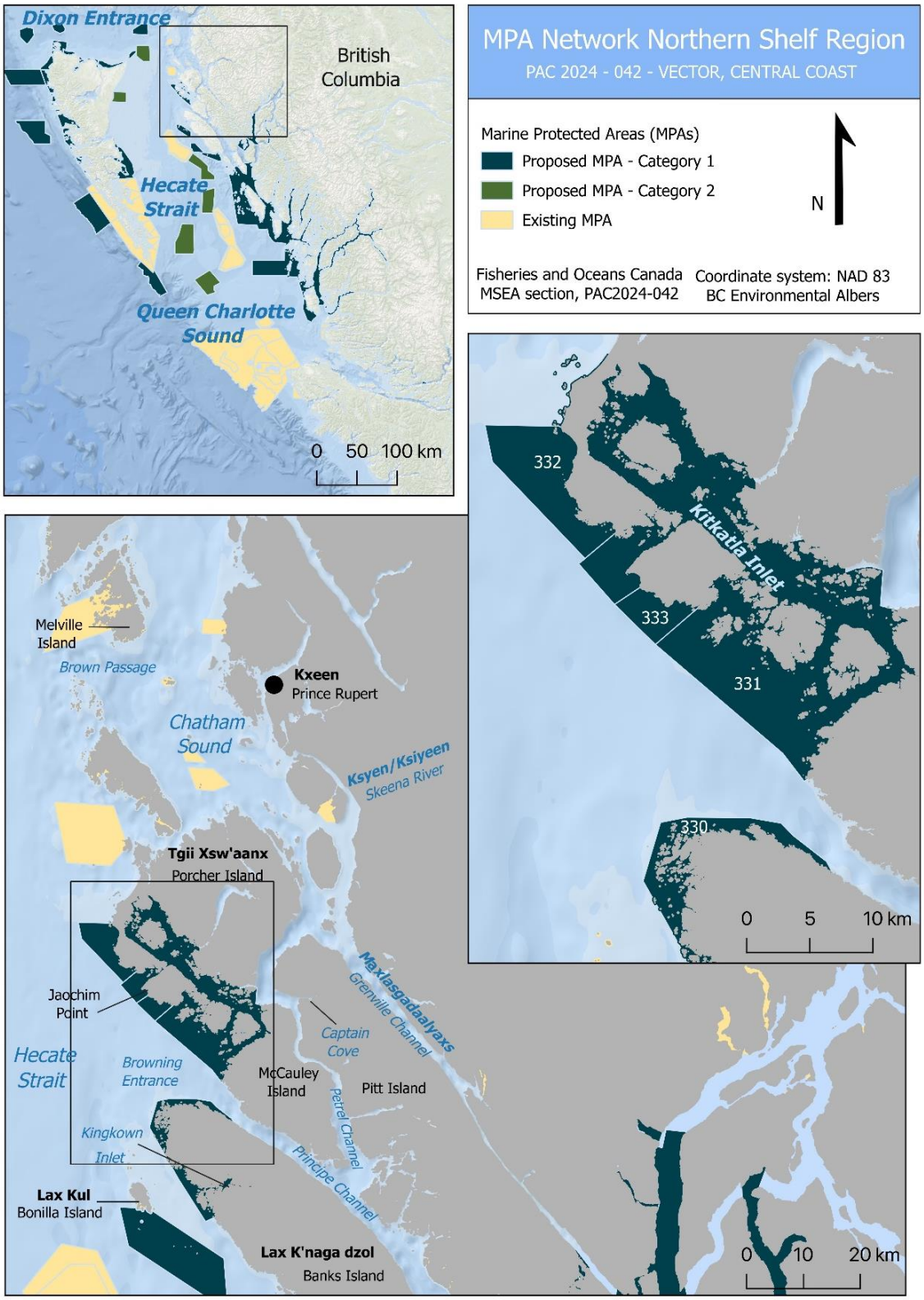


Figure 1. Map of the Kitkatla Inlet study area surveyed during the PAC2024-042 research cruise, including the Kitkatla Inlet Network zones identified as part of the Great Bear Sea MPA Network in the Northern Shelf Bioregion. The Goschen RCA overlaps the entirety of zone 333.

Table 1. Science staff on the 2024 coastal biodiversity survey (PAC2024-042).

Science staff	**Primary Roles**
Tammy Norgard (DFO)	Chief Scientist, dive surveys, intertidal biodiversity surveys (Legs 1, 2)
Michelle Bigg (DFO)	Dive surveys (Leg 1)
Sarah Davies (DFO)	Drone/RPAS surveys, beach seines (Leg 2)
Sarah Dudas (DFO)	Intertidal biodiversity surveys, eDNA (sand samples), microplastics sampling (Leg 2)
Cole Fields (DFO)	Drone/RPAS surveys, intertidal biodiversity surveys (Leg 2)
Kayleigh Gillespie (DFO)	Intertidal biodiversity surveys, debris surveys, wildlife cameras (Leg 2)
Vanessa Hodes (DFO)	Dive surveys (Leg 1)
Joanne Lessard (DFO)	Dive surveys (Leg 1)
Michelle Paleczny (DFO)	Beach seines, eDNA (water samples and sand samples), nearshore biodiversity site scouting (Legs 1, 2)
Bea Proudfoot (DFO)	eDNA (Leg 1)
Carrie Robb (DFO)	BRUV surveys, eDNA, beach seines (Leg 2)
Shannon Schmunk (DFO)	BRUV surveys, eDNA, microplastics sampling, gear logistics (Legs 1, 2)
Kristen Westfall (DFO)	eDNA (Leg 1)
Colton Nelson (Gitxaała Nation Guardian)	Intertidal biodiversity surveys, BRUV surveys, beach seines (Leg 2)
Isaiah McKay (Gitxaała Nation Guardian)	Intertidal biodiversity surveys, BRUV surveys, beach seines (Leg 2)



Figure 2. DFO staff participating in the dive surveys during Leg 1 of the 2024-042 survey.



Figure 3. DFO staff participating in Leg 2 of the 2024-042 survey.

Nearshore Biodiversity Surveys

Site Selection and Initial Visit

Target and backup sites within the Kitkatla Inlet Network Zones (Figure 5) were selected prior to the survey, using a Balanced Acceptance Sampling (BAS) approach (van Dam-Bates et al. 2018) to select 100 x 100 m coastal grid cells (aka Halton Boxes) that are balanced spatially and stratified across Shore Zone Coastal Classes (Coastal and Ocean Resources 2017). The code for the site selection is available at surveys/caamano · main · MSEA code / Survey site selection · GitLab.

An initial visit to the target sites was completed during the first leg of the PAC2024-042 cruise to confirm the site was surveyable (based on accessibility and accuracy of the Coastal Class data), scout locations for specific survey methods (e.g., intertidal biodiversity survey, beach seines), and mount wildlife cameras overlooking the survey area (Figure 4)



Figure 4. DFO staff setting up a wildlife cameras at three of the Coastal Biodiversity Survey sites.

Final site selection was made based on initial site visits and input from the Gitxaała Guardians. The target Baird Cliff site was determined upon initial visit to be too exposed for a full survey, so a modified intertidal survey was conducted at this site, and the adjacent Baird Point site was added as the location for a full survey. The target Borrowman Group site was surveyed in Leg 1 by the dive (SCUBA) team but, due to sea conditions, it was not feasible to revisit the site in Leg 2 to complete the additional survey methods. Instead, the Kitkatla Creek site (adjacent to a BAS selected site) was added based on interest from the Gitxaała Nation stewardship team. A map of all nearshore biodiversity survey sites is presented in Figure 5.

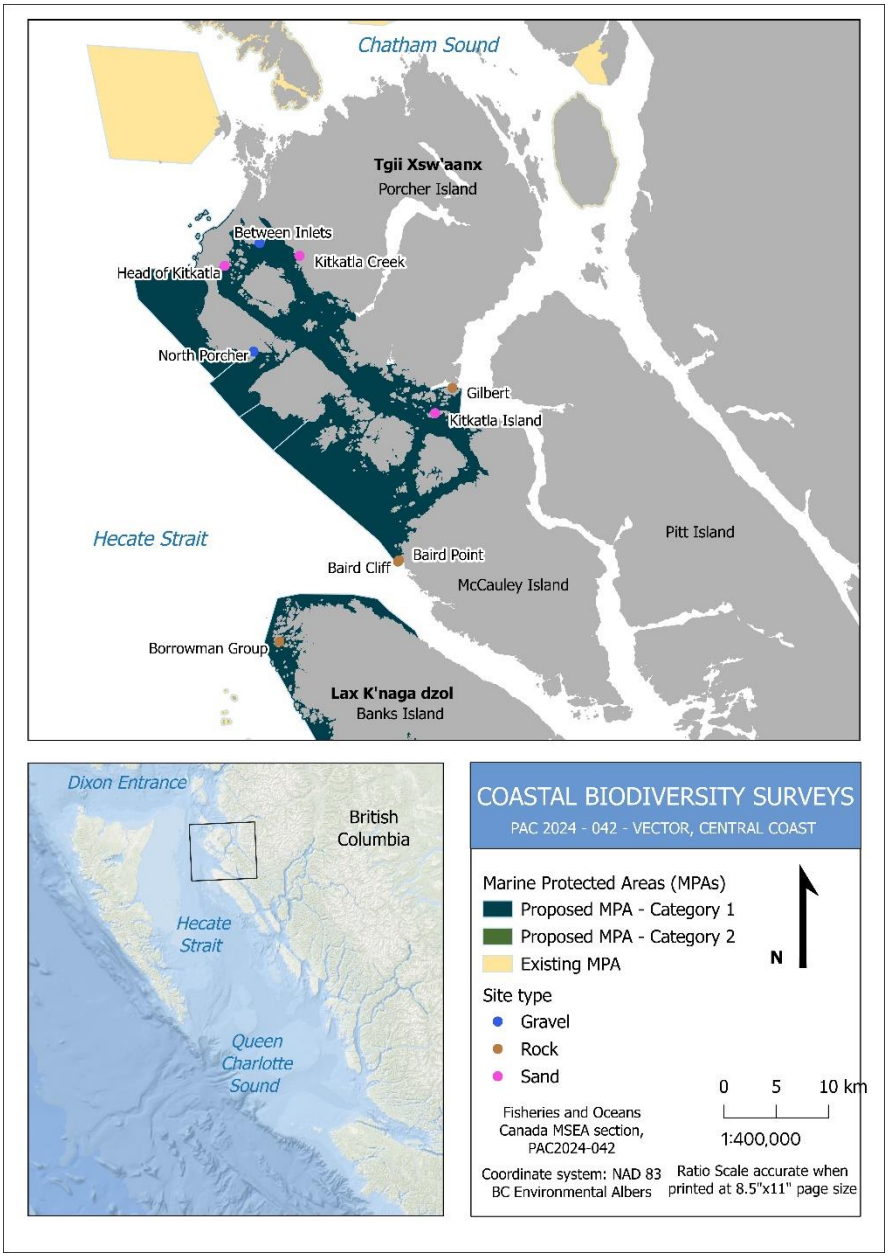


Figure 5. Map of nearshore biodiversity survey sites for the 2024-042 survey. Only the dive survey was conducted at the Borrowman Group site due to sea conditions during the second leg of the survey.

Survey Types and Objectives

This coastal biodiversity survey supports the long-term goal of obtaining baseline information on biodiversity and biological habitat characteristics of intertidal and nearshore areas across the coast of BC in support of marine conservation, marine spatial planning and emergency response planning. It provides important baseline information to inform monitoring of the Kitkatla Inlet Network Zones and the broader NSB MPA network.

Eight nearshore biodiversity sites (Figure 5) were surveyed at low tides (i.e., < 1.0 m MLLW) using a suite of survey methods. Objectives for each survey type are outlined in Table 2 and a summary of the methods employed at each site is found in Table 3.

*Table 2. Objectives of surveys at the coastal biodiversity sites. *BRUV surveys and ship-based eDNA and microplastic samples were also completed outside the coastal biodiversity sites.*

Survey Type	Objective(s)
Drone Surveys	• Conduct drone-based intertidal mapping surveys at multiple altitudes • Collect imagery used for mosaicking and photogrammetric reconstructions for beach-scale habitat classifications • Pair drone survey data with in-situ data collection to establish relationships between habitat cover types and observed epifauna and infauna
Intertidal Biodiversity Surveys	• Obtain baseline information on biological diversity in intertidal environments to support monitoring, marine spatial planning, and emergency response planning • Collect data on environmental characteristics of each site (e.g. substrate, cover)
Dive (SCUBA) Surveys	• Measure nearshore subtidal biodiversity along a series of depth-stratified transects
Beach Seines	• Use beach seining to gather baseline information on fish species diversity, size distribution, and relative abundance of nearshore fish communities to establish a baseline against which to measure future changes
Sand samples for eDNA of beach-spawning forage fish	• Collect sand samples and analyze for eDNA from beach-spawning forage fish species to gather information on their presence • Support regional efforts for mapping forage fish beach-spawning habitat
Shore-based water collection for eDNA metabarcoding	• Use eDNA metabarcoding to conduct rapid biodiversity assessments of proposed and existing MPAs to provide baseline information on species presence/absence and measures of relative abundance • Pair eDNA surveys with beach seine and BRUV surveys to allow for complementary assessments of nearshore fish diversity
Shoreline Debris	• Gather information on shoreline debris type, distribution, and abundance • Remove debris where feasible, and document sites where additional debris recovery is needed
Wildlife Cameras	• Identify terrestrial and avian fauna at select intertidal sites • Determine range of viable imagery (e.g. how far across and away can fauna be identified with a degree of certainty).
Baited Remote Underwater Video (BRUV)*	• Use BRUVs to gather information on site occupancy, size distribution, and relative abundance of nearshore fish communities to establish a baseline against which to measure future changes • Sample a variety of nearshore subtidal habitat types, from seagrass beds to sandy-bottomed ecosystems, to characterize diversity across different habitats

Table 3. Survey methods conducted at Nearshore Biodiversity Sites in Kitkatla Inlet. Latitude and longitude are displayed using decimal degrees (DD).

Date (2024)	Site	Latitude (DD)	Longitude (DD)	Coastal Class	Dive	Intertidal	eDNA (water samples)	BRUV	Drone	Beach seine	Wildlife Camera	eDNA (sand samples)	Shoreline debris
May 19	Borrowman Group*				x								
May 20,22	Gilbert Island	53.82408	-130.34747	rock	x	x	x	x	x	x	x	x	x
May 21,23	Kitkatla Islands	53.80025	-130.37125	sand	x	x	x	x	x	x	X***	x	x
May 24	Kitkatla Creek*	53.67435	-130.41045	sand	x	x	x	x	x	x		x	x
May 25	Baird Cliff	53.67318	-130.41176	rock		x**							
May 20,25	Baird Point	53.67435	-130.41045	rock	x	x	x	x	x	x	x	x	x
May 18,26	Head of Kitkatla Inlet	53.91622	-130.68983	sand	x	x	x	x	x	x	x	x	x
May 18,27	Between Inlets	53.936157	-130.640406	gravel	x	x	x	x	x	x	x	x	x
May 17,28	North Porcher	53.84391	-130.64003	gravel	x	x	x	x	x	x	x	x	x

* The Borrowman Group site was not surveyable on Leg 2. Instead, Kitkatla Creek was selected because it was of interest to the Gitxaała Nation.

** A modified intertidal biodiversity survey, described below, was conducted at Baird Cliff.

*** A wildlife camera was set up at Kitkatla Island but no photos were collected during deployment.

Wildlife Cameras

Methods

Wildlife cameras (Reconyx Hyperfire 2) were deployed at six sites (Table 9). At each location, a camera was attached to a tree, log, or snag at the forest edge of the intertidal zone at heights between 1 and 2.1 meters, pointing towards the water. Different camera angles relative to the beach were used to allow for extensive coverage of the study site. Still images were captured every 10 minutes between 4:30 and 22:30. The camera at the North Porcher site recorded through the night as well. Cameras were also programmed to take photos in response to motion. Cameras were retrieved after 5-12 days. No attractants were used, and cameras were targeting estuaries, beaches, and intertidal foraging habitat.

Results

The wildlife cameras detected a variety of terrestrial mammals and birds. Results are summarized in Table 4, with example image captures shown in Figure 6 and Figure 7.

Table 4. Species detected by wildlife cameras deployed at intertidal sites listed by deployment date.

Site	**Date deployed**	**Date retrieved**	**Species Observed**	**Notes**
North Porcher	May 17	May 28	Great Blue Heron (*Aredea herodias*) (Figure 7), Corvid (*Corvus* sp.)	2051 images captured
Head Kitkatla Inlet	May 18	May 26	Unidentified ducks	1485 images captured
Between Inlets	May 18	May 27	No wildlife captured	1277 images captured
Gilbert Island	May 20	May 28	Black-tailed Deer (*Odocoileus hemionus columbianus*), Corvid (*Corvus* sp.), female Cooper's Hawk (*Astur cooperii*) (Figure 6), unidentified dark animal, unidentified bird	1245 images captured
Baird Point	May 20	May 25	No wildlife captured	815 images captured
Kitkatla Islands	May 22	May 28	N/A	Camera was accidentally turned off during deployment, 0 images captured



Figure 6. Image showing a Cooper's Hawk captured with the wildlife camera at the Gilbert Island site.



Figure 7. Image showing a Great Blue Heron captured with the wildlife camera at the North Porcher site.

Dive (SCUBA) surveys

Methods

Dive surveys completed at the nearshore biodiversity sites had a random stratified survey design with randomly placed quadrats along four 40m-long transects that ran parallel to shore along predetermined depth contours (0m, 5m, 10m, 15m), and one long transect running perpendicular to shore from 0m depth to 18m depth (Figure 8, Figure 9). Invertebrates and algae biodiversity were assessed for the transects running parallel to shore to address the first objective. To note, all the depths referred to in this methodology are the tide-corrected depths. Methodology is documented in further detail below.

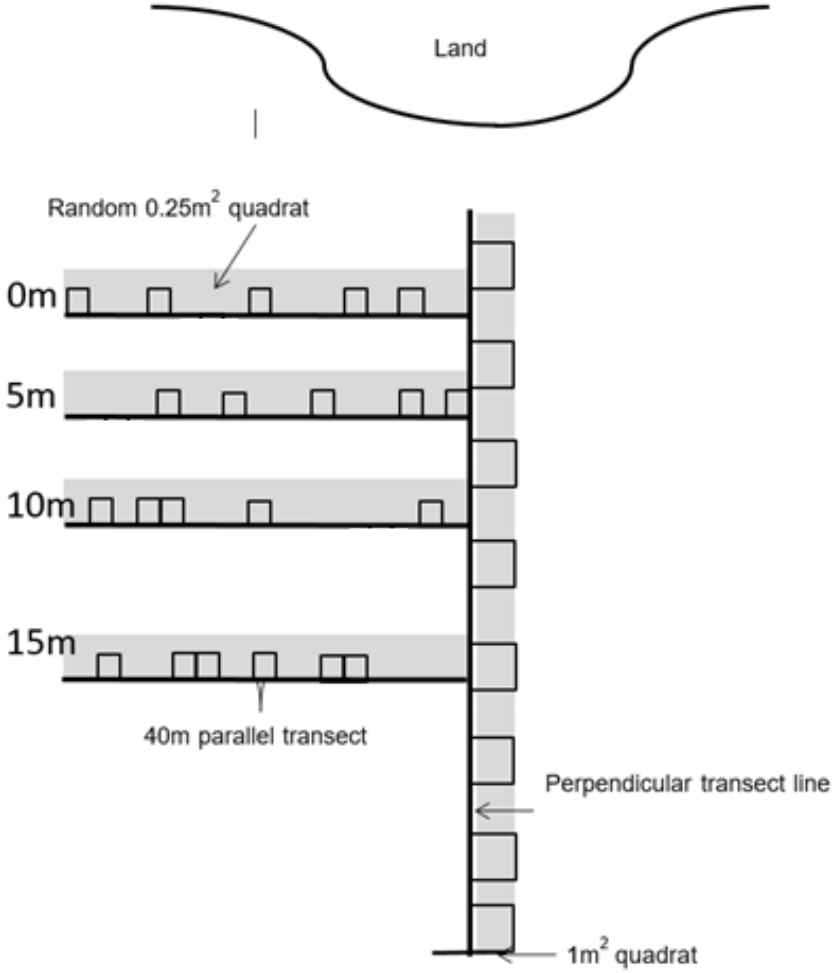


Figure 8. Diagram of how a dive survey was set up at each site with four transects running parallel to the shore, and one transect running perpendicular to shore.

Surface Recording

Dive tenders filled out dive logs for each dive, writing down the site and task(s) performed. Tenders also prepared and ensured datasheets were completed, noting the dive times.

Survey Setup

1. A lead line was placed from 0m (or as shallow as possible) to 18m depth. This line delineates the transect running perpendicular to shore

2. Divers followed the perpendicular lead line to appropriate depths for each of the four transects that ran parallel to the shore at 0m, 5m, 10m, and 15m. They used a 40m long tape placed along the given depth contour, either to the left or right of the lead line, to mark the four parallel transects. Transects were surveyed in priority order: 0m parallel transect, 5m parallel transect, 10m parallel transect, 15m parallel transect, perpendicular transect.
3. Along each parallel transect, six 0.25m^2 quadrats were randomly selected the 40m length, with divers placing the quadrat above (shoreward of) the leadline.
4. Within each quadrat, algae and invertebrates species and coverage were recorded on two data sheets and in video format with a GoPro camera.

Substrate and Algae Species

- The "Algae quadrat" data sheet was filled out first. Filling out this data sheet entailed recording depth, time, the 3 dominant substrate types and their % coverage, and all algae species in the quadrat.
- All algae species in the quadrat were recorded to the lowest taxonomic level possible (species in many cases, but in some cases it may only be possible to ID as a functional group (e.g., filamentous red algae)). Samples were taken to the surface for identification if needed.
- The % cover of Canopy, Understory, Turf and Encrusting algae species for the quadrat were also recorded. The % cover for each category considered all the algae making that category as a whole and not % cover for each species within that category. Drift algae was not recorded.
- Additionally, the algae diver estimated the abundance of invertebrates and bare rock as the % cover of encrusting algae + encrusting invertebrates + bare rock = 100%. For invertebrate's species that were under encrusting algae (e.g. *Dodecaceria* sp.), only the portion above the encrusting algae is considered for % cover – the % cover for the whole colony will be recorded by the invertebrate diver.

Invertebrate Species on Hard and Soft Substrates

- The second data sheet was called the "Invertebrates Quadrat". The invertebrates were surveyed after the algae as some algae may have had to be removed to see invertebrates properly. Invertebrates presence are recorded using the 'Invertebrates Quadrat' datasheet.
- For some species groups, the individual species were not listed on the datasheet as there were too many species that could be present within the group (e.g., crabs) but the data sheet included space for individual species to be recorded. All erect sponges and crabs encountered were identified to species if possible, and recorded on the datasheet in the spaces provided. Account for crabs 1m off the bottom. Shrimp and hermit crabs were noted but not necessarily identified to species. Only the presence of 2-3 species of Hydroid (whose species names were listed on the sheet) were recorded.
- Any invertebrates that could not be identified to a reasonably low taxonomic resolution underwater were taken to the surface in a Ziploc bag (labelled with the site and transect ID) for identification if possible; otherwise the video will be used for to help confirm taxonomy later.
- As there were very few species to identify on soft substrate, divers could identify those that were epibenthic using visual methods and the 'Invertebrates Quadrat' data sheet. For the invertebrates that were within the substrate, we attempted to use a PVC pipe pushed in to 20cm (same as intertidal), then tipped, to try to collect as much of the substrate and associated organisms as

possible and dump the content into a 5mm mesh bag, leaving the substrate to fall through the mesh. A label was added in the bag with the transect depth and quadrat number. The invertebrates collected were identified at the surface and returned to the bottom, if feasible.



Figure 9. Dive surveys underway at Baird Point.

Results

Dive surveys were completed at seven sites, including a site on Banks Island (Borrowman Group) that could not be surveyed with the other survey methods in Leg 2 due to sea conditions. In total, 21 transects were survey (3 transects per site) (Table 5) across a range of substrate types (Table 6). Table 5 shows the average depth of each transect. Table 6 shows the average percent of substrate type found within the quadrats at each site, as well as the number of quadrats in which each substrate was observed. Sand was observed in the largest number of quadrats, followed by mud, crushed shell, and bedrock with crevices. In the quadrats where the substrate was observed, bedrock with crevices covered the greatest average percent of the quadrats, followed by bedrock smooth, sand, and mud. Algae and marine plant richness observed in the sampled quadrats varied from 8-26 taxa at each site (

Table 7) and invertebrate richness ranged from 18-47 taxa observed (Table 8). Note that Northern Abalone (*Haliotis kamtschatkana*) was observed during the survey but is not included in the site-level details provided in this report (DFO 2012).

Efforts to collect invertebrate specimens embedded within soft sediments (final step in protocol above) proved overly onerous given the time constraints of the dive survey and were not completed.

Table 5. Summary of dive (SCUBA) transects completed at seven nearshore biodiversity sites in the Kitkatla Inlet Network Zones, including average depths surveyed.

Date	**Site**	**Transect**	**Average Depth (ft)**
May 17	North Porcher	0 m	15.67
		5 m	27
		10 m	45
May 18	Between Islets	0 m	11.67
		5 m	28.83
		10 m	38.67
May 18	Head of Kitkatla Inlet	0 m	12
		5 m	32
		10 m	46
May 19	Borrowman Group	0 m	12
		5 m	31.33
		10 m	47.17
May 20	Baird Point	0 m	11.17
		5 m	29.67
		10 m	41.83
May 20	Gilbert Island	0 m	16.33
		5 m	32.5
		10 m	47
May 21	Kitkatla Islands	0 m	11.67
		5 m	24.33
		10 m	38.17

Table 6. Average percent of each substrate type observed in the quadrats selected at each nearshore biodiversity site and across all sites. The number of quadrats in which the substrate type was observed is shown in parentheses.

	Substrate types									
Site	**Bedrock smooth**	**Bedrock with crevices**	**Boulders**	**Cobble**	**Crushed shell**	**Gravel**	**Mud**	**Sand**	**Whole/chunk shell**	**Wood/bark**
Baird Pt	100 (2)	94.375 (16)	-	-	22.5 (4)	-	-	-	-	-
Between Inlets	66.7(3)	-	67.5 (4)	20.8 (6)	15 (9)	-	83.3 (6)	49.1 (11)	15 (2)	10 (1)
Borrowman Group	-	100.0 (6)	-	-	10.0 (2)	-	-	98.3 (12)	-	-
Gilbert	66.7 (3)	80 (1)	80 (1)	-	20 (2)	10.8 (6)	33.8 (8)	55.9 (17)	12.8 (9)	-
Head of Kitkatla	-	-	20 (1)	41.7 (6)	45 (3)	22.5 (6)	36.4 (11)	53.8 (13)	16.4 (7)	-
Kitkatla Islands	70 (2)	30 (2)	-	-	20 (4)	-	86 (10)	100 (6)	13.3 (3)	10 (2)
North Porcher	-	55 (3)	33 (5)	15 (2)	6.25 (4)	-	16.7 (3)	80.3 (17)	10 (1)	-
Total % (count)	74 (10)	82.5 (28)	48.6 (11)	28.9 (14)	19.4 (28)	16.7 (12)	54.7 (38)	64.9 (76)	14.1 (22)	10 (3)

Table 7. Algae and plant taxa observed in quadrats along each transect at the seven nearshore biodiversity sites in the Kitkatla Inlet Network Zones.

Site	Transect	Species Observed	Transect Richness	Site Richness
Baird Point	0m	Articulated coraline, Codium sectchellii, Red algae branched, Brown algae branched, Ulva, A. marginata, S. Latissima, Red algae foliose, Costaria, Cladophora	10	11
	5m	Brown filamentous	1	
	10m	Brown filamentous , Red foliose	2	
Between Inlets	0m	Red foliose, Ulva, S. latissima, Costantinea sp., Fucus, Brown Branched , Acrosiphonia, Red branched, Green foliose	9	11
	5m	Desmarestia aculeata, Gracilaria	2	
	10m	Gracilaria, Red foliose, D. aculeata, Red foliose, Fucus	4	
Borrowman Bay	0m	Articulated corraline, Agarum fimbriatum, Agarum sp., A. marginata, Constantinea sp., Costaria, Cryptopleura sp., Polyneura sp., D. ligulata, D. viridis, Gloiocladia, Chondracanthus, S. groenlandica, S. latissima, Macrocystis, Red branched, Red foliose	16	26
	5m	A. clathratum, Alaria sp., Costaria, Cryptopleura sp., Polyneura sp., Cymathere triplicata, Desmarestia munda, Saccharina groenlandica, Opuntiella californica, Sparlingia pertusa, Red branched, Red foliose	11	
	10m	A. fimbriatum, Prionitis sp., Red branched, Red foliose	4	
Gilbert Island	0m	Ulva, Red branched, A. marginata, Gracilaria, D. viridis, Cymathere or Saccharina nigriposor or S. complanata, D. munda, Costeria	8	15
	5m	Gracilaria, Red foliose, D. ligulata, D. viridis	4	
	10m	Red branched, Encrusting algae, Chondracanthus, Red algae foliose, Neoptilota asplenioides, A. fimbriatum	6	
Head of Kitkatla	0m	S. latissima, Acrosiphonia, Prionitis, Red foliose, Red algae branched, Constantinea, Ulva, Sparlingia, Chondracanthus, A. fimbriatum, Neorhodomella, Brown filamentous, Gracilaria	13	15
	5m	Laminaria sp., Gracilaria, Brown filamentous, Red filamentous, Red foliose	5	
	10m	Brown filamentous	1	
Kitkatla Island	0m	Zostera, Gracilaria, S. latissima, Red branched	4	8
	5m	S. latissima, Brown filamentous, Ulva, Gracilaria, A. fimbriatum, D. viridis, Red branched	8	
	10m	A. fimbriatum, Red branched, Brown filamentous	3	
North Porcher	0m	Zostera, Gracilaria pacifica, Sarcodiotheca sp., Scinaia confusa, Drift algae	3	8
	5m	Red foliose, Brown filamentous, Red encrusting, Articulated coraline, Red thick encrusting , Encrusting red spongy	7	
	10m	Red foliose	1	

Table 8. Invertebrate taxa observed in quadrats along each transect at the seven nearshore biodiversity sites in the Kitkatla Inlet Network Zones.

Common Name	Scientific Name	North Porcher	Between Inlets	Gilbert Island	Baird Point	Kitkatla Island	Head of Kitkatla Inlet	Borrowman Bay
Black Leather Chiton	*Katharina tunicata*				x			
Black or Brown Turban Snail	*Tegula* sp.							x
Blue Topsnail	*Calliostoma ligatum*	x		x	x	x	x	x
Bright Red Sponge	*Antho (Plocamia) karykina*							x
Bristly Tunicate	*Halocynthia igaboja*						x	
Brittle Star				x			x	
Broadbase Tunicate	*Cnemidocarpa finmarkiensis*	x		x	x			x
Bryozoans Flat				x				x
Bryozoans on Kelp	*Membranipora villosa*			x			x	x
Burrowing Anemone	*Anthopleura artemisia*			x				
California Sea Cucumber	*Apostichopus californicus*	x			x		x	
Cellophane Tube Worm	*Spiochaetopterus costarum*	x			x	x		x
Chiton	*Tonicella* sp.	x	x	x	x	x	x	x
Cockerell's Dorid	*Limacia cockerelli*	x						
Cockle	*Clinocardium nuttallii*							x
Colonial Sea Squirt	*Didemnum* sp.							x
Common Acorn Barnacle	*Balanus glandula*				x			
Common Lampshell	*Terebratalia transversa*	x						
Coonstripe Shrimp	*Pandalus danae*						x	
Coralline-Encased Filament-Worm	*Dodecaceria concharum*				x			
Crangon Shrimp	*Crangon* sp.		x				x	
Crenate Barnacle	*Balanus crenatus*		x			x		x
Crust Bryozoan	*Membraipora* sp.			x				
Decorator Crab	*Oregonia* sp.			x		x		
Divariate Nut Clam	*Acila castrensis*					x		
Dwarf Calcareous Tubeworms	*Pileolaria* sp.	x	x	x	x	x	x	x
Emarginate Dogwinkle	*Nucella emarginata*	x			x			
Fan Bryozoan	*Dendrobeania murrayana*					x		
Feather Duster Worm	*Eudistylia vancouveri*	x		x	x	x	x	
Flat Yellow Sea Cucumber						x		
Flat Yellow Slippery Sponge	*Pleraplysilla*							x
Frilled Dogwinkle	*Nucella lamellosa*	x			x			

Common Name	Scientific Name	North Porcher	Between Inlets	Gilbert Island	Baird Point	Kitkatla Island	Head of Kitkatla Inlet	Borrowman Bay
Frosted Nudibranch	*Dirona albolineata*							x
Geoduck	*Panopea generosa*	x						
Graceful Kelp Crab	*Pugettia gracilis*							x
Graceful Rock Crab	*Metacarcinus gracilis*			x				
Green False Jingle	*Pododesmus macrochisma*			x				x
Green Proliferating Anemone	*Epiactis prolifera*							x
Green Sea Urchin	*Strongylocentrotus droebachiensis*			x	x			
Gumboot Chiton	*Cryptochiton stelleri*				x			x
Hairy Chiton	*Mopalia* sp. (possibly *kennerleyi)*		x					
Hairy Tunicate	*Boltenia villosa*			x				
Helmet Crab	*Telmessus cheiragonus*	x	x					x
Hermit Crab	*Paguroidea*	x	x	x	x	x	x	x
Horse Clam	*Tresus* sp.		x	x			x	
Hydrozoans		x	x	x	x		x	
Lattice-Work Bryozoan	*Phidolopora pacifica*			x				
Leafy Hornmouth	*Ceratostoma foliatum*	x			x	x		
Leather Star	*Dermasterias imbricata*				x			x
Lemon Dark Bumps Nudibranch					x			
Light Bulb Tunicate	*Clavelina huntsmani*							x
Mask Limpet	*Lottia persona*	x			x			
Monterey Sea-Lemon	*Doris montereyensis*				x			
Moon Snail Case	*Euspira* sp.	x						
Mottled Star	*Evasterias troschelii*	x	x	x	x		x	x
Needle Whelk	*Bittium* sp.				x			
Noble Sea Lemon	*Doris nobilis*							x
Northern Abalone	*Haliotis kamtschatkana*	Observed, but location not provided (DFO 2012).						
Ochre Star	*Pisaster ochraceus*				x			
Opalescent Nudibranch	*Hermissenda crassicornis*	x			x			x
Orange Cup Coral	*Balanophyllia elegans*	x		x	x			
Orange Sea Cucumber	*Cucumaria miniata*	x		x				
Orange Social Tunicate	*Metandrocarpa taylori*			x		x		
Other Compound Tunicate								x
Other Hydroids		x	x	x			x	

Common Name	Scientific Name	North Porcher	Between Inlets	Gilbert Island	Baird Point	Kitkatla Island	Head of Kitkatla Inlet	Borrowman Bay
Other Sponge Flat			x		x		x	
Other Worm	*Polychaete worm*					x		x
Pacific Little Neck Clam	*Leukoma staminea*						x	
Painted Star	*Orthasterias koehleri*					x		
Periwinkle	*Littorina* sp.				x			x
Phoronids	*Phoronida*				x			
Pink Mouth Hydroid	*Tubularia* sp.				x			
Plate/Mask Limpet	*Lottia scutum*	x			x			
Puppet Margarite	*Margarites pupillus*					x		
Purple Ringed Topsnail	*Calliostoma annulatum*				x			
Pygmy Rock Crab	*Glebocarcinus oregonensis*		x					
Red Calcareous Tubeworm	*Serpula columbiana*	x		x	x	x	x	x
Red Rock Crab	*Cancer productus*		x				x	x
Red Sea Urchin	*Mesocentrotus franciscanus*	x			x			x
Red Turban Snail	*Pomaulax gibberosus*				x			x
Rough Keyhole Limpet	*Diodora aspera*	x	x		x			
Sand Tube Worm	*Phragmatopoma californica*	x	x	x		x		x
Sea Pen	*Ptilosarcus gurneyi*					x		
Shield Limpet	*Lottia pelta*				x		x	
Shrimp	*Pandalus* sp.		x	x				x
Slime Feather Duster Worm	*Myxicola infundibulum*	x			x	x		
Spaghetti worm	*Thelepus crispus*				x			
Sponge Encrusting (unknown)								x
Sponge Flat			x		x		x	x
Staghorn Bryozoan (both species)	*Heteropora pacifica* or *Diaperoforma californica*			x	x			x
Stick Bryozoan	*Microporina articulata*			x		x		
Tan And Brown Cup Coral	*Carylophillidae (*includes *Paracyathus stearnsi, Caryophyllia alaskensis)*				x			
Tangleworm	*Phyllochaetopterus claparedii*							x
Thatched Acorn Barnacle	*Semibalanus cariosus*			x				x
Tube Dwelling Anemone	*Pachycerianthus fimbriatus*	x		x	x	x		x
Tube Worm-Decorated Tube						x		
Two-Spot Keyhole Limpet	*Fissurellidea bimaculata*							x

Common Name	Scientific Name	North Porcher	Between Inlets	Gilbert Island	Baird Point	Kitkatla Island	Head of Kitkatla Inlet	Borrowman Bay
White Lined Aldisa	*Aldisa albomarginata*							x
White Sea Cucumbers	*Eupentacta* sp.	x		x	x	x		x
White Slender Unknown Tube Worm	*Protula pacifica?*							x
White Tuft Bryozoan	*Crisia* sp.			x	x		x	x
Whitecap Limpet	*Acmaea mitra*	x		x	x			
Wrinkled Dove Snail	*Amphissa columbiana*	x			x			
Yellow Social Tunicate	*Perophora annectens*							x
Count of invertebrate taxa observed at site		**33**	**18**	**34**	**47**	**24**	**22**	**46**

Intertidal Biodiversity Surveys

Methods

Intertidal biodiversity survey methods, partially described in Cox et al. (2017) and to be detailed in an upcoming technical report[1], are in brief:

1. The site was laid out for random stratified sampling within intertidal zones, which are delineated by 40 m baseline tape measures placed parallel to the shoreline at 3.0, 2.2, 1.5 and 0.8 m above chart datum. The placement of the baselines was determined in relation to temporal tide height predictions for the nearest tide station from tides.gc.ca. The method was to use a laser level and stadia rod to locate the height of each baseline, which occurs at a vertical distance up the beach that is equal to the difference between the predicted tide height and the height of the given baseline. Five transects were set perpendicular to the baselines and 10 m apart (i.e., at 0, 10, 20, 30 and 40 meters) and one 0.5 m x 0.5 m quadrat was placed at a random distance along each transect within each intertidal zone (Figure 10).
2. Cover categories (defined groupings of seaweeds and abiotic substrates) and their percent contribution to a single cover layer were recorded on a data sheet for each quadrat.
3. Epifaunal organisms were identified and counted in 10 randomly selected squares of a gridded 0.5 m x 0.5 m quadrat with 100 squares (Figure 11).
4. In quadrats where soft substrate was present, sediment samples were taken from randomly selected soft-sediment quadrats. Three different types of sediment samples were collected: 200 mL (core diameter 5 cm, depth 10 cm) for grain size analysis, 15 mL (core diameter 2.5 cm, depth 3 cm) for meiofauna identification, and 10 mL (core diameter 1.5 cm, depth 5 cm) for organic content analysis.
5. In quadrats where soft substrate was present, substrate was excavated to a depth of ~0.25 m (total volume fills 2 x 5-gallon buckets) and sifted through a mesh bag with 5 mm pore size. All infaunal bivalves were identified and measured (length and width). Bivalve biomass was sampled opportunistically for dominant bivalve species, by collecting samples for lab measurement of shell dimensions, dry weight and wet weight.
6. Visual surveys covering 1 m on either side of each baseline were completed to record abundance of large, less common organisms that were not captured in quadrat data (e.g., crabs, sea stars).
7. Wildlife camera (set up in Leg 1) was removed from the site and images were manually scanned for large animal activity in the survey area.

[1] Dudas, S., Gillespie, K., Cox, K., and Paleczny, M. In prep. Coastal Biodiversity Protocol.

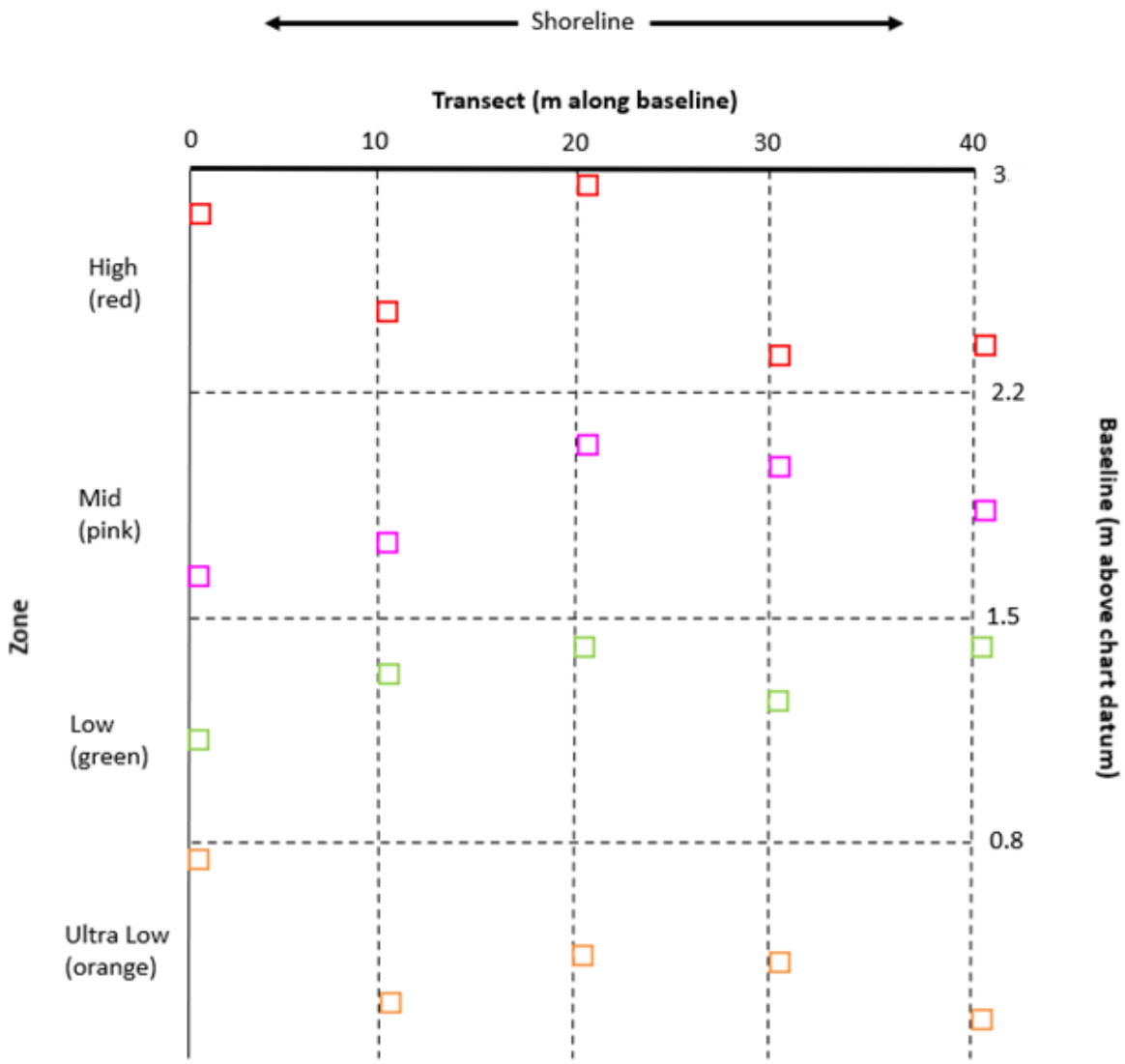


Figure 10. Site layout for coastal biodiversity surveys. A 40 m baseline is placed parallel to the shoreline at the 3.0 meter tidal height (thick horizontal line). Intertidal zones (high, mid, low, ultra-low) are delineated by marking additional baselines at 2.2, 1.5 and 0.8 meter tidal heights (dashed horizontal lines). A transect line is placed perpendicular to the shoreline at 0 meters along the baseline (vertical line). Transect lines are also marked at 10, 20, 30, and 40 meters along the baseline (vertical dashed lines). Survey quadrat flags are placed using a stratified random design, with one quadrat per zone randomly placed on each transect (colored by zone).



Figure 11. DFO staff surveying epifauna in quadrat at Between Inlets site.

A modified intertidal biodiversity survey was conducted at Baird Cliff (see rationale in site selection); this modified survey involved seven quadrats randomly situated between a baseline positioned at approximately 2.2 m and the water line at 1.5 m above chart datum (Figure 12).



Figure 12. Approximate location of the modified intertidal biodiversity survey baseline at the Baird Cliff (blue line, top), and photos of both ends of the baseline transect tape (bottom).

Results

Intertidal biodiversity surveys were conducted at all nearshore biodiversity sites representing rock, gravel, and sand coastal classes (Coastal and Ocean Resources 2017) (Figure 1). The Borrowman Group could not be surveyed in Leg 2 due to sea conditions so the Georeferenced aerial imagery collected from the drone surveys is displayed for all sites in the Site Summaries section. In addition, a modified intertidal biodiversity survey was conducted at Baird Cliff, which is depicted in Figure 12.

Epifaunal surveys (7 to 16 quadrats per site) were conducted at all sites and infaunal surveys (1 to 14 quadrats per site) were conducted at five sites (Table 9). Eighty-one clam specimens (from five species) were collected from two sites for biomass analysis; results are presented in Appendix 1. Eighteen sediment samples were collected from two sites (Kitkatla Creek and Head of Kitkatla Inlet); results from the meiofauna analysis, grain size analysis, and chemical analysis are summarized in Appendix 2.

A preliminary summary of cover data indicates 48 seaweed and abiotic cover types were observed, with highest diversity in cover types at Baird Point (n=28), Gilbert (n=25), and North Porcher (n=21) (Table 10).

A preliminary summary of infaunal clam data indicates that seven clam species were observed, with highest species diversity (n=6) and density (31 clams/quadrat) at Head of Kitkatla Inlet (Table 11).

A preliminary summary of epifaunal data indicates that 50 taxa were observed, with highest taxonomic richness (n=28) at Baird Point (Table 12).

Table 9. Summary of intertidal biodiversity survey activities per site, including infauna survey, epifauna surveys, sediment samples and clam biomass samples.

Coastal class	**Site**	**Epifauna survey quadrats (count)**	**Infauna survey quadrats (count)**	**Sediment sample quadrats (count)**	**Clam biomass specimens (count)**
rock	Gilbert Island	15	0	0	0
	Baird Cliff	7	0	0	0
	Baird Point	15	0	0	0
gravel	Between Inlets	15	1	0	0
	North Porcher	15	3	0	0
sand	Kitkatla Islands	15	6	0	0
	Head of Kitkatla Inlet	16	14	9	66
	Kitkatla Creek	15	10	9	15

Table 10. Seaweed and abiotic cover categories and their percent cover within survey site quadrats. Cover categories are organized from most to least abundant (based on the sum of cover), and cover names are organized alphabetically within. Sites are organized by Coastal Class.

Cover category	Cover name	Percent cover in quadrats								
		Rock sites			Gravel sites		Sand sites			Average
		Gilbert Island	Baird Cliff	Baird Point	Between Inlets	North Porcher	Kitkatla Islands	Head of Kitkatla Inlet	Kitkatla Creek	
Abiotic	Bedrock	1.3	4.0	2.6	0.8	0.6	0.1	0.0	0.0	1.2
	Boulder	1.8	0.0	0.5	3.9	2.3	4.7	0.0	0.0	1.6
	Cobble	1.3	0.0	0.0	2.0	3.4	1.5	0.7	1.0	1.2
	Gravel	0.2	0.0	0.0	1.0	0.6	0.8	3.1	2.0	1.0
	Sand	0.0	0.0	0.0	0.1	0.1	1.4	2.4	5.4	1.2
	Sand/mud	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.7	0.2
	Shell fragments	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.1
	Shell hash	0.0	0.0	0.5	0.6	0.1	0.7	0.5	0.7	0.4
	Shell whole	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	0.1
	Wood	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Brown Seaweed - Ochrophyta	Agarum	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.1
	Alaria	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.4
	Blade non-kelp	0.2	0.0	0.0	0.0	0.6	0.0	2.0	0.1	0.4
	Brown crust	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Brown turf	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Brown turf thick	0.4	0.1	0.0	1.7	0.8	0.0	0.0	0.4	0.4
	Brown turf thin	0.3	0.0	0.0	0.0	0.3	0.1	0.4	0.1	0.1
	Canopy non-kelp	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	0.0
	Costaria	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Cymanthere	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fucus	2.6	0.0	0.1	1.9	0.9	0.4	0.7	0.4	0.9
	Kelp	0.4	0.7	0.0	0.0	0.0	0.0	0.8	0.0	0.2
	Melanosiphon	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Saccharina	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.2
Green Seaweed - Chlorophyta	Acrosiphonia	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
	Green blades	0.6	0.0	0.7	0.2	1.7	0.5	1.4	0.3	0.7
	Green turf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Green turf thick	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.0	0.1

Cover category	Cover name	Percent cover in quadrats								
		Rock sites			Gravel sites		Sand sites			Average
		Gilbert Island	Baird Cliff	Baird Point	Between Inlets	North Porcher	Kitkatla Islands	Head of Kitkatla Inlet	Kitkatla Creek	
	Green turf thin	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Ulva	3.1	0.0	0.0	0.5	1.0	1.5	0.1	0.0	0.8
Red Seaweed - Rhodophyta	Articulated coralline	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Chamberlainium	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Halosaccion	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Hildenbrandia	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Mastocarpus	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Mastocarpus crust	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Microcladia	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Odonthalia	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Palmaria	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Porphyra	0.1	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.1
	Red blades	0.0	0.0	0.1	0.0	0.5	0.0	0.0	0.0	0.1
	Red crust	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Red crust coralline	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1
	Red crust non-coralline	0.2	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.1
	Red turf	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.1
	Red turf thick	0.1	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.1
Seagrass	Seagrass	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.2	0.2
	Zostera marina	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.2
Total # cover types per site		25	8	28	17	21	16	14	17	

Table 11. Bivalve taxa and their average density in quadrats at sites with soft sediment, which are grouped within their Coastal Class. Bivalve taxa are organized by relative abundance within excavated site quadrats (highest to lowest average density).

Common name	Latin name	Average density in excavated quadrats (individuals/quadrat)					
		Gravel sites		Sand sites			Average
		Between Inlets	North Porcher	Kitkatla Islands	Head of Kitkatla Inlet	Kitkatla Creek	
Butter Clam	*Saxidomus gigantea*	15	1	4	9	2	6
Pointed Macoma	*Macoma inquinata*	0	3	1	10	2	3
Bent-nose Macoma	*Macoma nasuta*	0	0	1	4	7	2
Cockle	*Clinocardium nuttalli*	0	2	2	1	4	2
Pacific Littleneck Clam	*Leukoma staminea*	1	0	0	6	1	2
Softshell	*Mya arenaria*	0	0	0	0	<1	<1
White Sand Macoma	*Macoma secta*	0	0	0	<1	0	<1
Total # clams		16	6	8	31	15	
Total # clam species		2	3	4	5	6	

Table 12. Epifaunal taxa and their total number of individuals observed at all sites, ordered from highest to lowest total count across all quadrats. Sites are organized by substrate.

Common name	Scientific name	Density in site quadrats (average # individuals / quadrat)								
		Rock sites			Gravel sites		Sand sites			Average
		Gilbert	Baird Cliff	Baird point	Between Inlets	North Porcher	Kitkatla Islands	Head Kitkatla Inlet	Kitkatla Creek	
Common and/or Northern Acorn Barnacles*	*Balanus glandula* and/or *Semibalanus balanoides**	14	0	<1	72	74	42	14	19	29
Barnacle	*Cirripedia*	113	14	21	15	20	39	2	<1	28
Little Brown Barnacle	*Chthamalus dalli*	0	105	61	7	29	0	0	0	25
Checkered Periwinkle	*Littorina scutulata*	<1	0	<1	12	0	<1	<1	3	2
Shield Limpet	*Lottia pelta*	2	1	3	1	4	2	<1	<1	2
Limpet	*Patellogastropoda*	2	8	<1	1	2	<1	0	0	2
Plate Limpet	*Lottia scutum*	<1	6	0	<1	<1	1	0	0	1
Sitka Periwinkle	*Littorina siktana*	2	0	<1	2	<1	1	2	<1	<1
Crenate Barnacle	*Balanus crenatus*	6	0	0	0	0	0	0	0	<1
Mask Limpet	*Lottia persona*	<1	0	1	1	0	<1	<1	<1	<1
Hairy Hermit Crab	*Paguras hirsutrusculus*	0	0	2	0	0	0	<1	<1	<1
Thatched Barnacle	*Semibalanus cariosus*	0	0	1	0	0	0	0	0	<1
Frilled Dogwinkle	*Nucella lamellosa*	0	1	<1	<1	0	0	0	0	<1
Mussel	*Mytilus* sp.	0	0	0	<1	<1	0	<1	<1	<1
Black Leather Chiton	*Katharina tunicata*	0	<1	<1	0	0	0	0	0	<1
Topsnail	*Trochida* sp.	0	0	0	0	<1	0	0	0	<1
Green Anemone	*Anthopleura* sp.	0	<1	0	0	0	0	0	0	<1
Littorina snail	*Littorina* sp.	0	0	<1	0	0	0	<1	0	<1

Common name	Scientific name	Density in site quadrats (average # individuals / quadrat)								
		Rock sites			Gravel sites		Sand sites			Average
		Gilbert	Baird Cliff	Baird point	Between Inlets	North Porcher	Kitkatla Islands	Head Kitkatla Inlet	Kitkatla Creek	
Broad Base Sea squirt	*Cnemidocarpe finmarkiensis*	0	0	<1	0	0	0	0	0	<1
Bittium Snail	*Bittium* sp.	0	0	<1	<1	<1	0	0	0	<1
Hermit Crab	*Pagurus* sp.	0	0	<1	0	0	0	<1	<1	<1
Blue Mussel	*Mytilus* sp.	0	0	0	0	0	<1	0	0	<1
Rockweed Isopod	*Lodotea wosnesenskii*	0	0	<1	0	0	0	0	0	<1
Chiton interstinctus	*Lepidozona interstincta*	<1	0	0	<1	0	0	0	0	<1
Orange Sea Cucumber	*Cucumaria minata*	0	<1	<1	0	0	0	0	0	<1
Lined Chiton	*Tonicella lineata*	0	0	<1	0	0	0	0	0	<1
Blue Top Snail	*Calliostoma ligatum*	0	<1	0	0	0	0	0	0	<1
Dire Whelk	*Lirabuccinum dirum*	0	<1	0	0	0	0	0	0	<1
Ochre Sea Star	*Pisaster ochraceus*	0	<1	0	0	0	0	0	0	<1
Orange Social Tunicate	*Ascidiacea*	0	<1	0	0	0	0	0	0	<1
Mottled Star	*Evasterias troschellii*	0	0	0	0	0	<1	0	0	<1
Tiny Black Sea Cucumber	*Cucumaria vegae*	0	0	<1	0	0	0	0	0	<1
Wrinkled Dove Snail	*Amphissa columbiana*	0	0	<1	0	0	0	0	0	<1
Breadcrumb Sponge	*Halichondria panicea*	0	0	0	<1	0	0	0	0	<1
Horned Nudibranch	*Hermissenda crassicornis*	0	0	<1	0	0	0	0	0	<1
Kelp crab	*Pugettia* sp.	0	0	0	0	<1	0	0	0	<1
Pink-tipped Green Anemone	*Anthopleura elegantisima*	0	0	0	0	<1	0	0	0	<1

Common name	Scientific name	Density in site quadrats (average # individuals / quadrat)								
		Rock sites			Gravel sites		Sand sites			Average
		Gilbert	Baird Cliff	Baird point	Between Inlets	North Porcher	Kitkatla Islands	Head Kitkatla Inlet	Kitkatla Creek	
Purple Shore Crab	*Hemigraspus nudus*	0	0	0	<1	0	0	0	0	<1
Red Urchin	*Strongylocentrotus franciscanus*	0	0	<1	0	0	0	0	0	<1
Tiny White Anemone	*Actiniaria*	0	0	0	0	<1	0	0	0	<1
Calliostoma snail	*Calliostoma* sp.	0	0	<1	0	0	0	0	0	<1
Lepidozona chiton	*Lepidozona* sp.	0	0	<1	0	0	0	0	0	<1
Lirabuccinium whelk	*Lirabuccinum* sp.	0	0	0	0	<1	0	0	0	<1
Leather Limpet	*Onchidella borealis*	0	0	<1	0	0	0	0	0	<1
Tegula snail	*Tegula* sp.	0	0	<1	0	0	0	0	0	<1
Chiton sp.	*Tonicella* sp.	0	0	0	0	0	0	<1	0	<1
Northern Striped Dogwinkle	*Nucella ostrina*	0	0	0	0	0	0	<1	0	<1
Tusk Shell	*Scaphopoda*	0	0	0	0	0	0	<1	0	<1
Woody Chiton	*Mopalia lignosa*	0	0	0	0	0	0	<1	0	<1
Bryozoan	*Bryozoa*	0	0	present	0	0	0	0	0	present
Total # epifaunal taxa		10	13	28	15	14	10	14	9	

* Some individuals recorded as *Balanus glandula* may actually be *Semibalanus balanoides* (these were not distinguished on this survey, but could be in the future).

Drone Surveys

Methods

Drone intertidal mapping surveys were conducted to document and classify habitat cover and fauna to describe and better understand habitat-fauna relationships. Drone imagery will be used for photogrammetric reconstruction of the intertidal zone. The surveys took place during low tide, allowing maximum exposure of the intertidal zone.

Prior to the flights, 8-10 ground control targets were deployed across the site. These were evenly distributed to improve photogrammetric accuracy, avoiding straight lines and ensuring targets covered both the edges and interior of the survey area. Targets were secured and left undisturbed until after the drone flights were completed. Intertidal biodiversity quadrats were marked with numbered flags in the upper-left corners, and the positions of both drone targets and quadrat corners were recorded using an Emlid Reach RS2+ GPS unit. All GPS positions were collected using a static base station and a rover GPS unit. The base station is set as a known benchmark; it connects with multiple satellite systems for the duration of the survey and broadcasts correction parameters to the rover allowing the rover to refine its position to within ~1 cm of its true position *relative* to the base station. Post-processing of the base station log file with Natural Resource Canada's Precise Point Positioning service can refine the GPS data to have an *absolute* accuracy of within 1-3 cm.

A gridded flight mission plan was developed using a polygon that encompassed the intertidal area. Flights were completed at altitudes of 30 m and 80 m to maintain a ground sampling distance (GSD, the pixel resolution of the imagery) appropriate for our objectives. A minimum of 75-80% image overlap was maintained between adjacent flight lines to avoid gaps in the data. Flight speeds were set between 0.5-1.0 m/s to prevent motion blur in the imagery.

The drone's camera was set to capture nadir images (90° downward). Camera settings were adjusted based on lighting conditions: in clear, stable weather, manual mode was used with the ISO set to 100 and the shutter speed at 1/300 or faster to ensure sharp imagery. Aperture settings were adjusted as necessary depending on the brightness of the scene. In conditions with variable lighting, an automatic aperture or shutter priority mode was used to maintain consistent image quality; this was the most commonly used option.

Data from the drone, rover, and base station were downloaded, backed up, and processed for subsequent analysis.

Results

Drone intertidal mapping surveys were conducted at seven sites at altitudes of 30 m and 80 m. Drone data collected on the surveys are stored on DFO's Azure cloud service platform. Following the survey, data processing was performed using post-processing protocols for survey location corrections and Pix4D or OpenDroneMap software were used to generate orthomosaics and other photogrammetry products. Flight metadata were captured and stored in the Airdata application, where flights can be reviewed. Orthomosaics for each site are illustrated in the Site Summary section of this report.

Beach Seines

Methods

Two beach seine sets were conducted at each site around low tide using a beach seine net was 9 m long and 2.1 m tall in the center, with 9 m bridles and a mesh size of 0.4 cm. Sets were situated near but not overlapping the intertidal biodiversity survey area, aiming to capture heterogeneity of available fish habitat, while also avoiding bouldery and/or steep areas where the lead line would not be continuously dragged along the seafloor so that organisms would not escape under the net. The net was set from the beach by extending it to its full length perpendicular to shore within the limits of chest waders (~1.5 m), then walking as far as possible parallel to shore without creating a gap at the shore end of the net, then walking back to shore. Fish and invertebrates were transferred to buckets of sea water with bubblers and ice packs, identified, counted, and measured (first 20 individuals of each fish species), and returned to their original location as quickly as possible. Photos were taken for verification of all species observed at each site.

Results

Beach seining was conducted at seven sites, with two sets at each site (Figure 13, Table 13). Across all sites, twenty-two species of fish were observed (Table 14), including some species that are relatively uncommon (Figure 14) and/or fished for food (Figure 15). Across all sites, thirteen invertebrate species were observed, including crabs and shrimps, and species of significance to fisheries (Table 13). Eelgrass (*Zostera marina*) was present at all sites except Head of Kitkatla Inlet (Figure 13).

Table 13. Beach seine set locations and habitat conditions. Latitude (Lat.) and longitude (Lon.) coordinates in decimal degrees (DD).

Site	Set 1 Lat. (DD)	Set 1 Lon. (DD)	Set 2 Lat. (DD)	Set 2 Lon. (DD)	Habitat Notes	Eelgrass Presence
Gilbert Island	53.8238	-130.3492	53.824	-130.349	Cobble, sand, mud pocket south of rocky intertidal baseline	Continuous
Kitkatla Islands	53.8004	-130.3706	53.8	-130.3702	Long narrow bay, eelgrass, sand, mud, shell, a couple of boulders	Continuous
Kitkatla Creek	53.9273	-130.5823	53.9276	-130.5823	Freshwater input, sand, lots of eelgrass and of *Saccharina latissima*, salmon jumping, seabirds, Dungeness crabs	Continuous
Baird Point	53.6741	-130.4097	53.6741	-130.4907	Bedrock with pockets of shell hash, sand, and *Z. marina* between Baird Pt. islet and larger island to east; no freshwater input	Continuous
Head of Kitkatla Inlet	53.9153	-130.6893	53.9153	-130.6896	Freshwater input, pocket between bedrock, mud, sharp cobble, shells, fucus	None observed
Between Islets	53.9367	-130.6422	Not noted	Not noted	Freshwater input, cobble with sand and gravel, small boulder, fucus, drift kelp; windy and wavy during seines	None observed
North Porcher	53.844	-130.6395	53.8444	-130.6392	Freshwater input, boulder beach with gentle slope, large eelgrass bed, mud/sand	Continuous



Figure 13. DFO and Gitxaała Guardian staff conducting beach seines at each site: Gilbert Island (top left), Kitkatla Island (top right), Kitkatla Creek (middle left), Baird Point (middle right), Head of Kitkatla Inlet (bottom left), Between Inlets (bottom middle), and North Porcher (bottom right).

Table 14. Fish and invertebrate taxa caught in beach seines at the nearshore biodiversity survey sites. Sites names are ordered by sampling date.

Species	Latin Name	Gilbert Island	Kitkatla Islands	Kitkatla Creek	Baird Point	Head of Kitkatla Inlet	Between Inlets	North Porcher
Invertebrates								
Crangon Shrimp	*Crangon* sp.		2	9		4		1
Dock (Coonstripe) Shrimp	*Pandalus danae*	46	86	530		32	5	
Dungeness Crab	*Metacarcinus magister*			1		1		
Euphausiacea	*Euphausiacea* sp.				10			
Graceful Decorator Crab	*Oregonia gracilis*		6	1				
Graceful Kelp Crab	*Pugettia gracilis*	1			1			
Green Shore Crab	*Hemigrapsus oregonensis*							1
Greenmark Hermit Crab	*Pagurus caurinus*				1			
Hairy Hermit Crab	*Pagurus hirsutiusculus*	2		4	7	27	1	
Helmet Crab	*Telmessus cheiragonus*			2		1	1	
Heptacarapus shrimp	*Heptacarapus* sp.				5			
Hippolyte Shrimp	*Hippolyte* sp.				8	1		
Kelp Isopod	*Pentidotea wosnesenskii*			1	1	13		
Total Individuals (Invertebrates)		49	94	548	33	79	7	2
Total Taxa (Invertebrates)		3	3	7	7	7	3	2
Fishes								
Bay Pipefish	*Syngnathus leptorhynchus*	4						4
Buffalo Sculpin	*Enophrys bison*		1	9		2		1
Crescent Gunnel	*Pholis laeta*	2	15	19	1	7		7
Fluffy Sculpin	*Oligocottus snyderi*	2	4		2			1
Great Sculpin	*Myoxocephalus polyacanthocephalus*					2	2	
Padded Sculpin	*Artedius fenestralis*	28	15	12	4	2		2

Species	Latin Name	Gilbert Island	Kitkatla Islands	Kitkatla Creek	Baird Point	Head of Kitkatla Inlet	Between Inlets	North Porcher
Penpoint Gunnel	*Apodichthys flavidus*	2			6			
Pholidae (juvenile)	*Pholidae* sp.	1						1
Rock Greenling	*Hexagrammos lagocephalus*				2			
Rockweed Gunnel	*Apodichthys fucorum*	1						
Shiner Perch	*Cymatogaster aggregata*						4	
Silver Spotted Sculpin	*Blepsias cirrhosus*				7			1
Smoothhead Sculpin	*Artedius lateralis*		2	1				
Snailfish	*Liparis* sp.				2			
Snake Prickleback	*Lumpenus sagitta*			2				1
Speckled Sanddab	*Citharichthys stigmaeus*		1					
Staghorn Sculpin	*Leptocottus armatus*	5		15		1		
Starry Flounder	*Platichthys stellatus*	1	5	2		1		1
Threespine Stickleback	*Gasterosteus aculeatus*			4				
Tidepool Sculpin	*Oligocottus maculosus*	68	33	1	2	8	4	167
Tidepool Snailfish	*Liparis florae*	1						
Tubesnout Poacher	*Pallasina barbata*					5		
White spotted Greenling	*Hexagrammos stelleri*	2	6			1		2
Total Individuals (Fishes)		117	82	65	26	29	10	188
Total Taxa (Fishes)		12	9	9	8	9	3	11
Total Individuals (Invertebrates and Fishes)		**166**	**176**	**613**	**59**	**108**	**17**	**190**
Total Taxa (Invertebrates and Fishes)		**15**	**12**	**16**	**15**	**16**	**6**	**13**



Figure 14. Relatively uncommon fish species caught in seines: Tidepool Snailfish (Liparis florae) caught at Gilbert Island (left) and Tubesnout Poacher (Pallasina barbata) caught at Head of Kitkatla Inlet (right); the latter represents the only Pacific Canada record of this species on iNaturalist at this time.

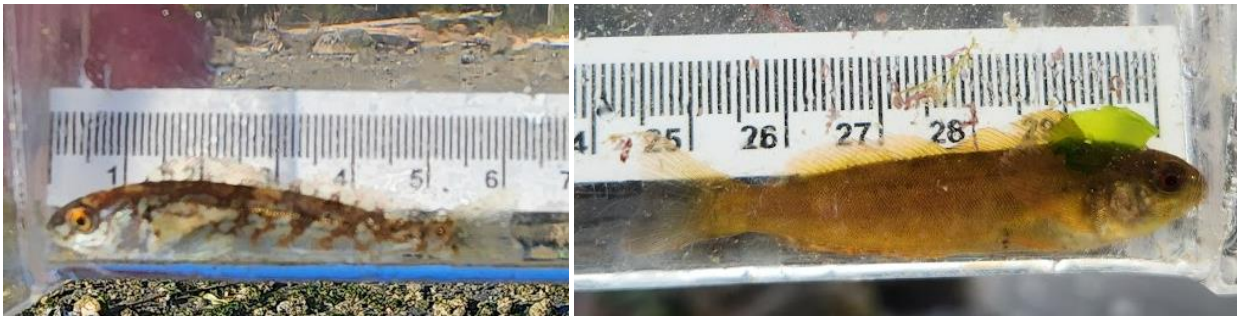


Figure 15. Food fish species caught in beach seines: juvenile white Spotted Greenling (Hexagrammos stelleri) caught at Gilbert Island (left) and juvenile Rock Greenling (H. lagocephalus) caught at Baird Point (right).

Sand Samples for eDNA of Beach-spawning Forage Fish

Pacific Canada's beach-spawning forage fish (Pacific Sand Lance (*Ammodytes hexapterus)* and Surf Smelt (*Hypomesus pretiosus)*) are ecologically and culturally important (e.g., as Ecological Conservation Priorities (ECPs) in the Northern Shelf Bioregion MPA Network, Gale *et al.* 2019) but the spatial extent of their spawning habitat is not well mapped. To support mapping of their spawning habitat (e.g., Huard *et al.* 2022), we used sand samples and eDNA analyses (developed by Robinson *et al.* 2022) to gather information on their presence at coastal biodiversity survey sites with potentially suitable habitat.

Methods

Satellite and aerial imagery (Shorezone) were used to detect potentially suitable intertidal spawning habitat for beach-spawning forage fish in and around the Coastal Biodiversity sites; potentially suitable habitat was defined by literature (e.g., WWF 2020) and expert knowledge (Jacqueline Huard at Project Watershed) as: sand spits, tombolos, and other beaches with coarse, loose, mud-free sand and lots of current. The full range of intertidal heights was considered to be potential spawning habitat given that Pacific sand lance may also spawn in shallow subtidal sand wave fields (Jacqueline Huard Pers. Comm).

At sites with potentially suitable spawning habitat, one surface (1-5 cm) sand sample of ~250 mL was gathered from throughout the area below the last high tide wrack line; sample collection methods are described in a guide developed by Jacqueline Huard at Project Watershed Society, and will be detailed in an upcoming technical report[1]. Sampling was not performed on days with heavy rain or hot and sunny weather to increase the probability of eDNA detection.

Sediment samples were frozen and shipped to Ocean Wise Environmental DNA Lab at the Pacific Science Enterprise Center in Vancouver, who extracted DNA from the sediment and used qPCR to test for the presence of Pacific sand lance and surf smelt (Robinson and Laqua 2025).

Results

Five sites were sampled on this survey (Table 15, Figure 16).

Table 15. Sand samples collected for analysis of eDNA of beach-spawning forage fish at coastal biodiversity survey sites. Coordinates are in decimal degrees (DD).

Date Collected (2024)	Site	Latitude (DD)	Longitude (DD)	Description of potentially suitable habitat and species observed
May 24	Kitkatla Creek	53.928	-130.580	Pockets of coarse sand and pea gravel, small sand tombolo, creek, cranes, shorebirds, eagles, gulls, eelgrass, juvenile salmon
May 25	Baird Point	53.674	-130.409	Coarse sand with shell hash and gravel, small schooling fish, eelgrass
May 26	Head of Kitkatla Inlet	53.916	-130.691	Coarse sand, pea gravel, shell hash on beach and tombolo, stream
May 27	Between Inlets	53.936	-130.641	Coarse sand, pea gravel, cobble, boulders, stream, eelgrass
May 28	Porcher Peninsula	53.844	-130.640	Only small pockets of sand and pea gravel, stream, eelgrass



Figure 16. Sites of sand sampling for beach-spawning forage fish eDNA: Kitkatla Creek (top left), Baird Point (top right), Head of Kitkatla Inlet (centre), Between Inlets (bottom left), and Porcher Peninsula (bottom right).

Results of analyses by Ocean Wise Environmental DNA Lab (Robinson and Laqua 2025) indicate that neither Pacific Sand Lance or Surf Smelt DNA were present in the sand samples collected. This was not unexpected, given that the samples were collected in May, outside of what is known of the spawning windows: Nov-Feb for Pacific Sand Lance; June-Sept for Surf Smelt (WWF 2020). Assessment of presence would require further sampling within the spawning window. The collaboration with the Gitxaała Nation helped develop capacity for sampling during these periods by demonstrating protocols and sharing knowledge (e.g., lab analysis).

Shore-based Water Collection for eDNA Metabarcoding

Methods

During the 2024-042 survey, three litres of water were collected at each nearshore biodiversity site (Figure 5) to use in eDNA metabarcoding analyses to assess intertidal and subtidal fish communities at the sites. The data from the eDNA metabarcoding can also be compared with the fish data collected using BRUVs and beach seines to provide a complementary assessment of nearshore fish biodiversity at the selected sites.

Depending on sites characteristics, seawater samples were collected from the dive skiff, typically upon the initial approach to the site prior to seining (to avoid contamination caused by the net or disturbed sediments). If the intertidal site was not suitable for seining, seawater samples were collected from the dive skiff on approach to the seine location. Metal hose clamps were used to secure a cleaned and bleach-sterilized Nalgene pottle to a sampling pole. To ensure no traces of bleach remained in the bottle, the bottle was filled and rinsed with seawater three times prior to collecting the sample. The bottle was then held approximately 30 cm below the surface, filled with seawater and closed. Three 1L bottles were collected in this way at each station. Samples were stored on ice in a cooler for transport to the *Vector* lab. A 1.0 L Nalgene of distilled water was used as a field blank where at each site the field blank bottle was opened and exposed to the air for approximately the length of time required to collected an individual sample (~1 minute) and then placed in the cooler with the other samples.

In addition to the data collected at the nearshore biodiversity sites, three seawater samples and one field blank bottle were collected from the dive skiff prior to the BRUV deployment at each of the sampling locations inside and outside of the Goschen RCA. The sampling followed the methods described above for the nearshore sites.

Upon return to the CCGS Vector, the collected water samples were filtered using a Smith-Root eDNA sampler with self-preserving filters, which was an update to the protocol using kangaroo bags that was followed in earlier years of the Coastal Biodiversity Survey (e.g., Proudfoot et al. 2005a,b). The self-preserving filters use a biodegradable/hydrophilic resin to absorb moisture from the filter membrane, which automatically preserves the captured DNA. This approach eliminates the need for freezing, storage and preservation and greatly reduces the potential for contamination because filters remain in the housing and packaging until they are processed. Plastic tubing was attached to the 'out' spout of the sampler, with the other end placed in a beaker to measure the amount of water filtered. A second plastic tube was attached to the 'in' spout of the sampler, with the other end attached to a new self-preserving filter and placed inside the Nalgene bottle of water collected from each site. The sampler was started and as the water was being filtered, the unique sample ID (MCT number), filter start time, filter end time, volume (L) filtered, the Smith-Root ID (unique number recorded by the sampler), the Smith Root Unit Name, and any relevant notes were recorded. This method was very efficient, and the Smith-Root was able to filter 1 L of water (i.e., 1 sample) in approximately 2-3 minutes with no sterilization or cleaning required between samples. Once 0.6 L of water had filtered, the filter was removed from the Nalgene bottle and inverted (help upside down in the air). At 0.8 L of water filtered, the sampler was stopped and the filter was placed back in the original bag and sealed.

The filters were returned to DFO's Pacific Biological Station for further processing. Detailed DNA extraction and metabarcoding methods followed the same methods as previous years, and are described in Proudfoot et al. (2025a).

Results

Details on the eDNA samples collected at the nearshore biodiversity sites are provided in Table 16. The shore-based eDNA biodiversity baseline samples detected 144 fish taxa from 43 families, including 36 taxa identified as MPA network-wide ecological conservation priorities (ECPs) or as conservation objectives (COs) for the Kitkatla Inlet Network Zones (MPA Network BC Northern Shelf Initiative 2023). Further, 284 invertebrate taxa from 13 phyla were detected, of which 17 taxa were identified as ECPs or COs. Three mammal ECPs or COs (Harbour Porpoise (*Phocoena Phocoena*), Steller Sea Lion (*Eumetopias jubatus*), and Harbour Seal (*Phoca vitulina*) were detected. Finally, 94 plant/algae taxa were detected, including two ECPs or COs. Refer to Appendix 3 and 4 for full species by site matrices for fish and invertebrates, respectively. Mammal and plant/algae species lists are available upon request. Note that locations of Northern Abalone (*Haliotis kamtschatkana*) are not published in compliance with the Northern Abalone Action Plan (DFO 2012).

Water was also collected from six additional sites inside/outside the Goschen RCA (Table 16) and 111 fish, 256 invertebrate, two mammal, and 112 plant/algae species were detected. Refer to Appendix 5 for the fish species by site matrix. Invertebrate, mammal, and plant/algae data are available upon request. Site-specific species richness of fish and invertebrate taxa are shown in Figure 17.

Table 16. Site details where eDNA samples were collected from the nearshore biodiversity sites or inside and outside the Goschen RCA (denoted with ^). Samples were collected from a dive. One blank per day was collected at each station. Coordinates are for the first sample at each site and are shown in decimal degrees (DD).

Station	Date Sampled	Sample Longitude (DD)	Sample Latitude (DDM)	Number of bottles per station	Depth Sampled (m)
Gilbert Island	May 22	130° 20.916	53° 49.464	3	0.3
Kitkatla Islands	May 23	130° 22.252	53° 48.005	3	0.3
Kitkatla Creek	May 24	130° 35.016	53° 55.596	3	0.3
Baird Point	May 25	130° 24.675	53° 40.498	3	0.3
Goschen RCA Out 1^	May 25	130° 31.201	53° 47.052	3	0.3
Goschen RCA Out 2^	May 25	130° 38.258	54° 48.516	3	0.3
Goschen RCA Out 3^	May 25	130° 32.020	53° 46.702	4	0.3
Goschen RCA In 1^	May 25	130° 36.558	53° 47.546	3	0.3
Goschen RCA In 2^	May 25	130° 37.589	53° 47.996	3	0.3
Goschen RCA In 3^	May 25	130° 33.492	53° 47.370	3	0.3
Head of Kitkatla Inlet	May 26	130° 41.438	53° 54.865	3	0.3
Between Inlets	May 27	130° 38.449	53° 56.148	3	0.3
North Porcher*	May 28	130° 38.339	53° 50.624	3	0.3
Blanks	Daily	-	-	8	-
Total				**48**	

* Coordinates for North Porcher site are from one of the BRUV sampling locations at the site.

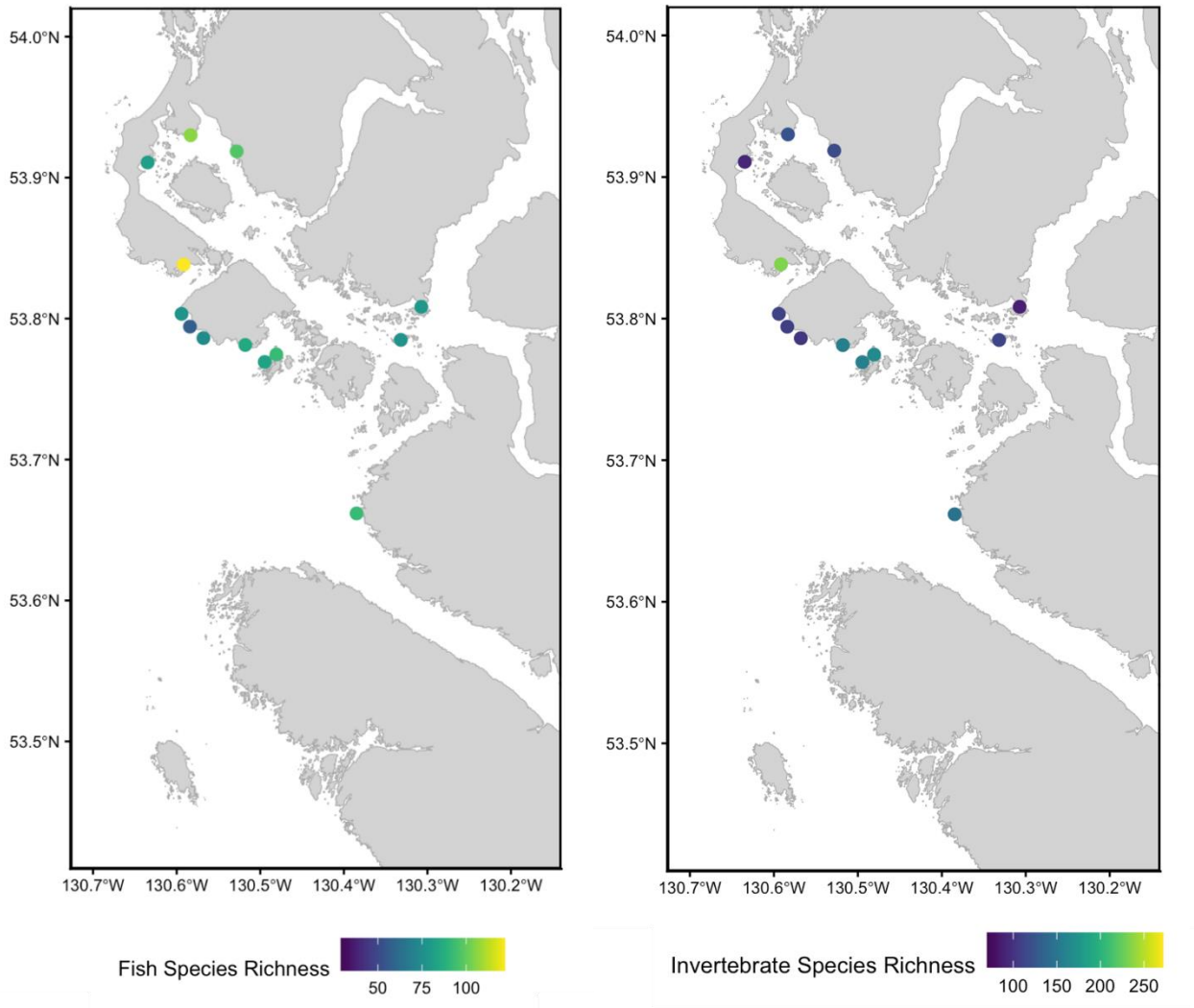


Figure 17. Fish (left) and invertebrate (right) species richness from eDNA samples collected at nearshore biodiversity sites and inside/outside the Goschen RCA within the Kitkatla Inlet Network Zones from the PAC2024-042 survey.

Shoreline Debris Surveys

Methods

At each site, a 90 m stretch of shoreline was searched for debris, including intertidal areas and above the high tide line (where debris carried by surf can be hidden within vegetation). A second transect was completed at the Gilbert site because a large amount of debris was found beyond the survey area. The survey methodology was adapted from the NOAA Marine Debris Shoreline Survey Field Guide (2012) and the datasheet found on page 8 of that report was used for the surveys. A technical report describing the methodology is currently in preparation[2].

Results

Shoreline debris was observed at six of the eight sites (Table 17, Figure 18, Figure 19), with plastic being the most common composite material found. Results of note included: an accumulation of large amount of rope and fishing gear debris at North Porcher (Figure 18) and debris (urinal mat) at Gilbert Island potentially from the containers spilled from the M/V Zim Kingston shipping vessel off the west coast of Vancouver Island in October 2021[3]. Some debris was removed from all sites (limited by time and boat space), but accumulations remain at North Porcher and Kitkatla Island, as well as Gilbert Island to a lesser extent. There were no 'Paper' or 'Other' items (mixed material items that are difficult to define) found. Unremovable items describe debris that were not physically possible to remove and included a net hung in a tree and a large drum at Gilbert Island. In addition, an accumulation of debris in coastal vegetation was noted that was located outside of the survey transect at Kitkatla Island. This debris was not recorded in the survey but was hauled off the beach for appropriate disposal.

*Table 17: Total count by category of shoreline debris items observed at each site. Refer to the **NOAA Marine Debris Shoreline Survey Field Guide (2012)** for definitions of the debris categories.*

Site	Transect length (m)	Plastic (count)	Glass (count)	Rubber (count)	Fabric (count)	Metal (count)	Paper (count)	Other (count)
Kitkatla Creek	45	0	0	0	0	0	0	0
Between Inlets	90	5	0	0	0	0	0	0
North Porcher	90	35	2	0	6	5	0	0
Baird Point	35	0	0	0	0	0	0	0
Head of Kitkatla Inlet	90	33	0	0	16	0	0	0
Gilbert Island (transect 1)	90	1	0	0	1	0	0	0
Gilbert Island (transect 2)*	45	17	0	1	3	0	0	0
Kitkatla Islands	90	2	0	0	2	0	0	0
Total – All Sites		**93**	**2**	**1**	**28**	**5**	**0**	**0**

* Time allowed for a second transect to be completed at Gilbert Island as a training opportunity for survey staff. Little debris was observed in the first transect close to the intertidal survey site and the second transect was completed further down the beach.

[2] Davies, S.C., Gillespie, K., Dudas, S., Bigg, M. In Prep. Shoreline Debris Protocol.

[3] https://www.tsb.gc.ca/eng/enquetes-investigations/marine/2021/m21p0297/m21p0297.html



Figure 18. Shoreline debris observed at North Porcher site.



Figure 19. Shoreline debris observed at the Head of Kitkatla Inlet site.

Baited Remote Underwater Video (BRUV) Surveys

Methods

Baited Remote Underwater Video (BRUV) systems were deployed from small research vessels (*Palmira* or *Rossia*) at seven of the eight nearshore sites selected for biodiversity surveys within the Kitkatla Inlet Network Zones (Figure 20). Additional deployments were conducted at two locations inside and four outside the Goschen RCA, overlapping Zone 333, to collect imagery of nearshore fish populations. The BRUVs consisted of two GoPro HERO cameras (version 7 or 11) secured in waterproof housings (SeaGIS, Bacchus Marsh, Victoria, Australia) and mounted on a metal bar that fit into a metal frame (Figure 20). A 1.3 m pole with an attached bait jar extended into the cameras' field of view. The two camera housings were positioned for stereo-imagery analysis, allowing accurate measurement of fish sizes in the video footage. Each camera was mounted on a Plexiglas plate with an O-ring that fit into the housing and was secured using two draw latches. Each housing is calibrated to a specific camera and can only be used with that unit, and the camera and housing positions were fixed and require calibration if altered. The camera housing bar had two slots that friction-fit onto the frame, and was secured with bungee cords and longline clips. Four 2 lb dive weights were attached to the bottom of the frame to keep the system upright and from moving underwater. A line, with the length corresponding to the deployment depth at each site, was attached via a 4-point bridle to the top of the frame, with a float attached for retrieval.

Prior to deployment, the bait jar was filled with ~150 g (~2.5 fish) of chopped, previously-frozen herring and ~125 g (~1/2 cup) of crab and prawn bait pellets, and the camera housing bar and bridle line was secured to the main frame. A Secchi disk was used to assess water clarity and a CTD castaway was deployed to collect temperature, salinity, and depth profiles of each site. To maximize the amount of underwater video collected (GoPro batteries last up to ~ 90 minutes for both the GoPro Hero 7 and 11 cameras), the cameras were turned on immediately before deployment. After the cameras were turned on and secured into the housings, a clapperboard marked with the date, site name, and camera ID numbers was closed in front of the two cameras to synchronize the video to allow for later fish size measurement. The BRUV was then deployed over the side of the boat. When the BRUV touched the bottom, the line was pulled up slightly and released again to ensure the BRUV settled flat and the excess line was tossed overboard. After a minimum of 60 minutes, the BRUV was retrieved and pulled back onboard the dive boat using a prawn trap puller (Brutus Pacific Pro – Scotty Mount, Ace Line Hauler, Nanaimo, BC) and disassembled. Once back in the lab aboard the CCGS Vector, the video footage was reviewed and backed up and batteries were recharged for subsequent deployments.



Figure 20. BRUV deployment. Top left: front view of BRUVs, including bait pole. Bottom left: inserting GoPro cameras into the housings. Right: retrieving one of the BRUVs.

Intertidal Biodiversity Survey Sites

Following the approach used during the 2021-2023 surveys (Proudfoot et al. 2005a,b,c), BRUVs were deployed in subtidal areas adjacent to the beaches selected for the intertidal component of the coastal biodiversity surveys. Prior to the survey, the components for three additional BRUV systems were acquired, increasing the total number of BRUVs deployed at each nearshore biodiversity site from three (used in previous surveys) to six. Consistent with previous surveys, deployment locations were selected to cover a range of depths and habitat types relevant to each coastal site. These deployment locations are shown in the maps provided in the Site Summaries section.

Inside-Outside RCA sites

BRUV deployments were also conducted at sites located within and outside the Goschen RCA. Sites outside the RCA were positioned between 0.9-1.9 km from the RCA boundary (Figure 21). Site selection followed the developing survey design recommendations for monitoring RCAs.[4] Sampling areas inside the RCA and in adjacent control areas were identified by compiling environmental and fisheries spatial datasets and using geoprocessing steps. These steps delineated areas within the RCA and nearby

[4] Jeffery, S., Gale, K.S.P., Nephin, J., Gemmell, O., Burke, L., Paleczny, M., Francis, F., Chaves, L., Siegle, M., Frid, A., Dudas, S., Bluteau, C., and Haggarty, D. In press. Ecological Monitoring Advice for Rockfish Conservation Areas. DFO Can. Sci. Advis. Sec. Res. Doc. 2025/nnn. iv + xx p.

reference areas that were comparable in depth, complexity, and pre-implementation fishing effort. Once these candidate areas were defined, three sites within the RCA and three sites outside the RCA were randomly selected using a balanced acceptance sampling protocol (van Dam-Bates et al. 2018). Site selection was constrained to depths between 5 and 15 m

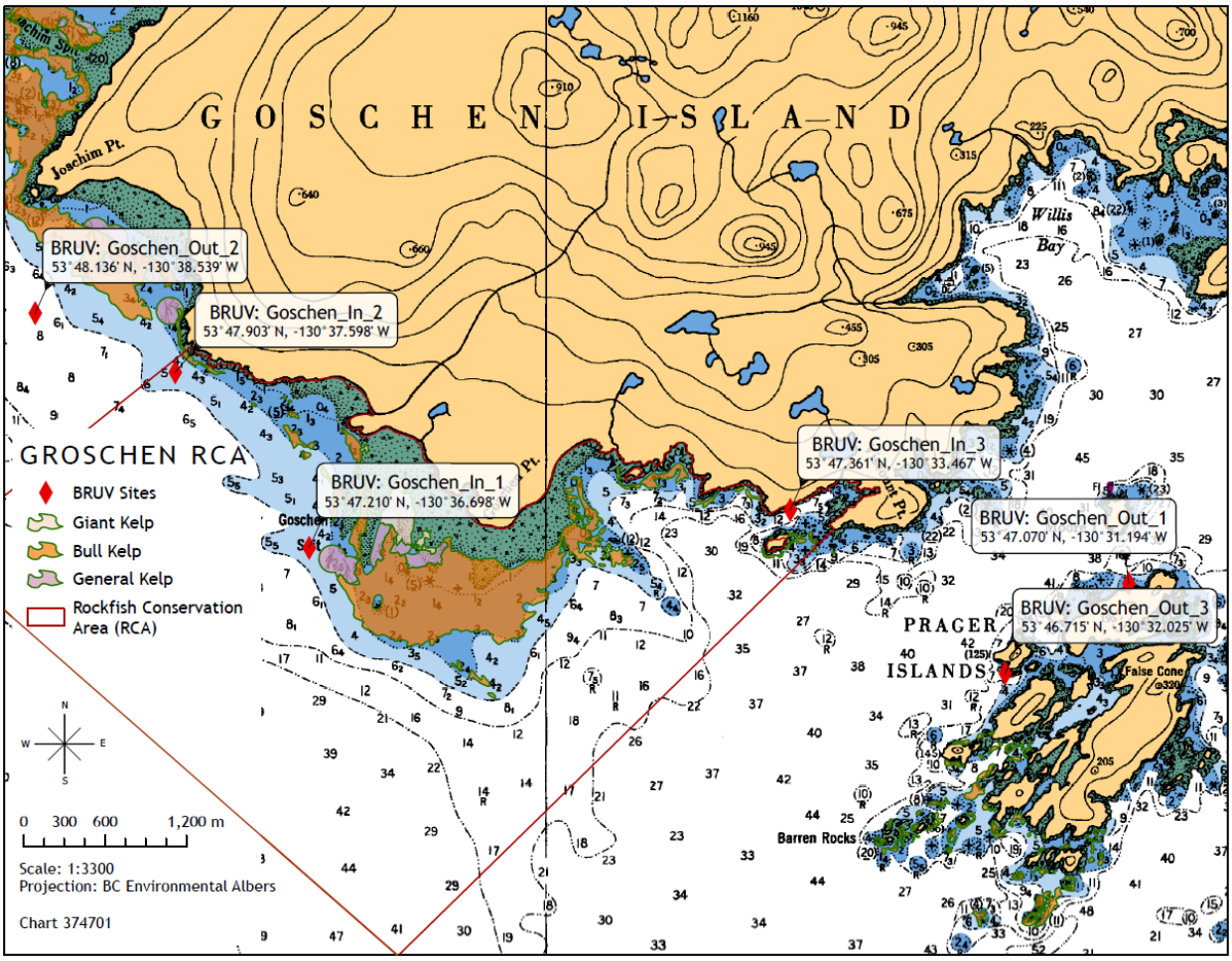


Figure 21. Sampling locations selected for the BRUV survey inside and outside of the Goschen RCA. Kelp data compiled by the BC Marine Conservation Analysis (BCMCA Project Team 2011).

Results

The BRUVs were deployed in six locations adjacent to each coastal survey site, as well as two locations inside and four outside of the Goschen RCA (Table 18). As a result of rough sea conditions, and the exposed nature of the Goschen RCA, the 'In 2' site was deployed approximately 125 m outside of the mapped RCA boundary. The six Goschen RCA BRUV deployments were left for an extended period (up to 3 days), until sea conditions were suitable for BRUV retrieval with the small research vessel. At Kitkatla Creek, an erroneous reading from the dive boat's depth sounder on the third deployment resulted in the BRUV being placed significantly deeper than the length of the attached line. Subsequent attempts to retrieve the BRUV with a grapple were not successful. An initial annotation of most of the video files has been completed and a preliminary list of observed species is found in Table 19, with example images in Figure 22. Quality assurance and quality control (QA/QC) procedures have not yet been completed.

Table 18. Details of Baited Remote Underwater Video (BRUV) deployments. Coordinates shown in degrees, decimal minutes (DDM).

Date	Site Name	#	Latitude (DDM)	Longitude (DDM)	Time In	Depth (m)	Camera #	Visibility (m)	Substrate	Notes
May 21	Gilbert Island	O1	53 49.729	130 20.742	8:09	5.5	1046, 1049	3.9	Mixed fines	Picked up next day
	Gilbert Island	O2	53 49.845	130 21.592	8:59	7.1	1048, 1047	3.9	Mixed fines	Picked up next day
	Gilbert Island	B1	53 49.545	130 21.001	9:43	7.6	1606, 1605	2.2	Mixed fines	Picked up next day; clapper had wrong station number (O2)
	Gilbert Island	B4	53 49.501	130 20.933	10:01	7.0	1607, 1608	3.5	None visible	Picked up next day; high current
	Gilbert Island	B5	53 49.453	130 21.099	10:16	7.0	1609, 1604	3.6	Mixed fines	Picked up next day
	Gilbert Island	B6	53 49.679	130 20.895	8:33	5.3	1034, 1035	3.4	Mixed fines	Picked up next day
May 22	Kitkatla Islands	B1	53 47.997	130 22.213	12:45	4.6	1606, 1605	5	None visible	
	Kitkatla Islands	B2	53 47.92	130 21.989	12:17	3.9	1609, 1604	3.5	Bedrock	BRUV pointing up into water column
	Kitkatla Islands	B3	53 48.051	130 21.866	11:43	9.8	1034, 1035	6	N/A	No video recorded
	Kitkatla Islands	B4	53 48.137	130 22.069	11:55	7.6	1048, 1047	5	Mixed fines, boulders	
	Kitkatla Islands	B5	53 47.912	130 22.428	12:30	3.9	1607, 1608	4.5	Bedrock	
	Kitkatla Islands	B6	53 48.189	130 21.563	11:23	7.3	1046, 1049	4.5	Mixed fines, boulders	
May 23	North Porcher	B1	53 50.597	130 38.411	12:40	5.4	1048, 1047	4.75	Mixed fines	
	North Porcher	B2	53 50.470	130 38.300	12:50	7.0	1034, 1035	3.9	None visible	Line under BRUV knocked frame over
	North Porcher	B3	53 50.662	130 38.201	12:27	9.1	1607, 1608	4.1	Mixed fines	
	North Porcher	B4	53 50.577	130 37.792	12:12	7.9	1609, 1606	4.8	Cobble	
	North Porcher	B5	53 50.618	130 37.650	11:59	7.4	1606, 1605	5	Mixed fines, cobble	
	North Porcher	B6	53 50.284	130 38.306	13:03	9.4	1046, 1049	4.4	Mixed fines	
May 24	Head Kitkatla	B1	53 54.875	130 41.251	15:02	7.3	1607, 1608	4.7	None visible	Landed in kelp
	Head Kitkatla	B2	53 54.915	130 41.008	15:14	9.8	1609, 1604	4.5	None visible	Landed in kelp
	Head Kitkatla	B3	53 54.957	130 40.731	15:26	11.0	1606, 1605	5.2	Mixed fines, bedrock	
	Head Kitkatla	B4	53 54.680	130 41.379	14:49	6.4	1048, 1047	4.4	None visible	Landed in kelp
	Head Kitkatla	B5	53 54.511	130 41.430	14:36	11.9	1034, 1035	5	Mixed fines	
	Head Kitkatla	B6	53 54.397	130 41.398	14:20	10.7	1046, 1049	4.9	Mixed fines	
May 25	Baird Point	B1	53 40.998	130 24.669	8:20	9.8	1606, 1605	6.4	N/A	Video not yet annotated
	Baird Point	B2	53 40.610	130 24.602	8:32	11.6	1609, 1604	6.9	N/A	Video not yet annotated
	Baird Point	B3	53 40.802	130 24.392	8:44	7.9	1607, 1608	6.6	N/A	Video not yet annotated
	Baird Point	B4	53 40.375	130 24.664	9:01	9.0	1047, 1048	7.6	None visible	

Date	Site Name	#	Latitude (DDM)	Longitude (DDM)	Time In	Depth (m)	Camera #	Visibility (m)	Substrate	Notes
	Baird Point	B5	53 40.357	130 24.357	9:13	4.3	1046, 1049	6	Bedrock	
	Baird Point	B6	53 40.143	130 24.093	9:25	9.9	1034, 1035	7.8	Mixed fines	
May 25	Goschen In	1	53 47.590	130 36.640	15:53	10.7	1606, 1605	4.8	Boulders	Picked up 3 days later due to sea conditions
	Goschen In*	2	53 48.057	130 37.577	16:07	7.3	1607, 1608	3.9	Boulders, mixed fines	Picked up 3 days later due to sea conditions
	Goschen In	3	53 47.373	130 33.494	15:28	7.6	1046, 1049	4.3	N/A	Picked up next day; BRUV unit landed on back, pointed straight up into water column
	Goschen Out	1	53 47.048	130 31.198	15:10	3.7	1048, 1047	5	No visible, covered with algae	Picked up next day
	Goschen Out	2	54 48.553	130 38.396	16:23	6.1	1609, 1604	4.8	Boulders	Picked up 3 days later due to sea conditions
	Goschen Out	3	53 46.695	130 32.019	14:55	7.6	1034, 1035	4.3	Bedrock	Picked up next day
May 27	Between Inlets	B1	53 56.126	130 38.365	9:29	5.7	1048, 1047	4.5	None visible	Landed in kelp
	Between Inlets	B2	53 56.099	130 38.866	7:49	7.3	1048, 1047	4.3	Mixed fines	
	Between Inlets	B3	53 56.113	130 38.125	9:36	6.4	1034, 1035	3.6	Mixed fines	
	Between Inlets	B4	53 56.132	130 57.818	9:47	9.9	1046, 1049	4.3	Mixed fines	
	Between Inlets	B5	53 56.120	130 39.174	7:39	8.2	1034, 1035	3.9	Mixed fines	
	Between Inlets	B6	53 55.884	130 39.142	7:29	11.0	1046, 1049	4.1	Mixed fines, boulders	Visibility: 4.1 m
May 27	Kitkatla Creek	B1	53 56.021	130 35.805	12:45	6.4	1048, 1047	4.5	N/A	Camera dislodged; bait jar not visible
	Kitkatla Creek	B2	53 55.687	130 36.040	15:37	n/a	1048, 1047	5.3	N/A	BRUV lost due to incorrect depth reading during deployment; no video
	Kitkatla Creek	B3	53 55.686	130 35.353	16:06	3.9	1034, 1035	5.5	Mixed fines	
	Kitkatla Creek	B4	53 56.053	130 36.571	12:17	11.3	1046, 1049	4.5	Mixed fines, bedrock	
	Kitkatla Creek	B5	53 56.187	130 36.279	12:37	3.7	1034, 1035	5.3	N/A	Bait pole broke; video not useable
	Kitkatla Creek	B6	53 55.848	130 35.634	15:56	4.0	1046, 1049	5.3	None visible	Landed in eelgrass

* The final location of the BRUV deployment and water samples were between 50-125 m outside of the RCA boundary.

*Table 19. Fish and invertebrate species observed during BRUV deployments. These results are preliminary, as quality assurance and quality control (QA/QC) procedures for video annotation have not yet been completed. Site names for site codes are: BI - Between Inlets; BP - Baird; GB - Gilbert Island; GI - Goschen RCA In; GO - Goschen RCA Out; HK - Head Kitkatla Inlet; KC - Kitkatla Creek; KI - Kitkatla Islands; NP - North Porcher. *Not all video files from the Baird Point (BP) site have been annotated.*

Scientific name	Common name	Site code																																					
		BI						BP*			GB						GI		GO			HK						KC			KI				NP					
		B1	B2	B3	B4	B5	B6	B4	B5	B6	B1	B4	B5	B6	O1	O2	B1	B2	B1	B2	B3	B1	B2	B3	B4	B5	B6	B3	B4	B6	B1	B4	B5	B6	B1	B3	B4	B5	B6
Fishes																																							
Family Embiotocidae	Surfperches	x	x			x													x				x		x										x				
Cymatogaster aggregata	Shiner Perch			x		x																	x		x					x					x				
Embiotoca lateralis	Striped Surfperch																		x			x																	
Family Pleuronectidae	Righteye Flounders	x	x	x	x	x				x	x				x	x								x		x	x		x								x			x
Hippoglossus stenolepis	Pacific Halibut							x	x																															
Lepidopsetta bilineata	Rock Sole																																					x	
Microstomus pacificus	Pacific Dover Sole																										x												
Platichthys stellatus	Starry Flounder																						x			x	x												
Family Gobiidae	Gobies										x																													
Rhinogobiops nicholsii	Blackeye Goby										x																									x		x		
Aulorhynchus flavidus	Tubesnout																						x																
Ronquilus jordani	Northern Ronquil								x																															
Syngthus leptorhynchus	Kelp Pipefish																														x								
Anoplarchus sp.	Cockscomb sp.																															x							
Family Cottidae	Sculpins			x	x								x											x									x						
Leptocottus armatus	Pacific Staghorn Sculpin					x					x					x											x			x	x								
Myoxocephalus polyacanthocephalus	Great Sculpin																																				x		

Scientific name	Common name	Site code																																							
		BI						BP*			GB						GI		GO			HK						KC			KI				NP					
		B1	B2	B3	B4	B5	B6	B4	B5	B6	B1	B4	B5	B6	O1	O2	B1	B2	B1	B2	B3	B1	B2	B3	B4	B5	B6	B3	B4	B6	B1	B4	B5	B6	B1	B3	B4	B5	B6
Scorpaenichthys marmoratus	Cabezon																																		x				
Family Hexagrammidae	Greenlings					x		x				x				x			x						x					x									
Hexagrammos sp.	Greenling sp.							x												x					x														
Hexagrammos decagrammus	Kelp Greenling							x	x	x											x		x		x							x	x				x	x	
Hexagrammos stelleri	Whitespotted Greenling	x	x			x					x		x	x		x				x						x	x			x				x	x	x		
Ophiodon elongatus	Lingcod									x			x																										
Oxylebius pictus	Painted Greenling																															x	x				x		
Sebastes sp.	Rockfish sp.						x												x	x																		
Sebastes caurinus	Copper Rockfish							x									x																			x			
Sebastes flavidus	Yellowtail Rockfish																																	x					
Sebastes melanops	Black Rockfish																																	x					
Sebastes nebulosus	China Rockfish																				x																		
Hydrolagus colliei	Spotted Ratfish							x	x	x																												x		
Arrhichthys ocellatus	Wolf Eel																																				x			
Family Cancridae	Rock Crabs		x		x		x				x	x		x	x												x				x								
Invertebrates																																								
Cancridae sp. 1	Rock Crab				x																																			
Cancridae sp. 2	Rock Crab			x	x	x	x			x		x				x							x	x							x								
Cancer productus	Red Rock Crab	x	x			x	x															x						x											
Metacarcinus sp.	Dungeness or Graceful crab														x											x	x	x		x				x					
Metacarcinus magister	Dungeness Crab		x				x																			x	x		x										
Telmessus cheiragonus	Helmet Crab			x							x		x										x												x				
Pugettia sp.	Kelp Crab												x																			x							
Metridium sp.	Plumose Anemone						x																																	

Scientific name	Common name	Site code																																							
		BI						BP*			GB						GI		GO			HK						KC			KI				NP					
		B1	B2	B3	B4	B5	B6	B4	B5	B6	B1	B4	B5	B6	O1	O2	B1	B2	B1	B2	B3	B1	B2	B3	B4	B5	B6	B3	B4	B6	B1	B4	B5	B6	B1	B3	B4	B5	B6
Metridium farcimen	Giant Plumose Anemone								x																															
Pachycerianthus fimbriatus	Tube Anemone																																			x				x
Ptilosarcus gurneyi	Orange Sea Pen																																					x		
Family Asteriidae	Sea Stars		x									x																												
Pycnopodia helianthoides	Sunflower Sea Star										x																													
Crossaster papposus	Common Sea Star																															x								
Dermasterias imbricata	Leather Sea Star																																	x						
Strongylocentrotus sp.	Sea Urchin								x												x												x				x		
Strongylocentrotus droebachiensis	Green Sea Urchin								x									x		x	x																x		
Mesocentrotus franciscanus	Red Sea Urchin								x									x			x											x		x			x	x	
Strongylocentrotus purpuratus	Purple Sea Urchin																	x		x												x					x		
Cucumaria sp.	Sea Cucumber								x											x																			
Cucumaria miniata	Orange Sea Cucumber								x								x			x																	x		
Apostichopus californicus	California Sea Cucumber									x	x	x	x	x	x																						x		x	
Cryptochiton stelleri	Gumboot Chiton																			x																			
Haliotis kamtschatka	Northern Abalone	Observed, but location not provided (DFO 2012).																																						
Family Sabellidae	Feather Duster Worms																																							x
Total species per site		4	7	5	5	8	6	6	10	6	9	5	6	3	4	5	2	3	4	8	5	2	7	3	5	5	7	2	2	6	3	10	3	6	7	4	10	8	3



Figure 22. Examples of fish and invertebrate species and habitats observed in BRUV videos (left to right, starting from top left: Red Rock Crab, Kelp Greenling, Copper Rockfish, Quillback Rockfish, Spotted Ratfish with Rock Sole and California Sea Cucumber, Dungeness Crab, Pacific Halibut and Plumose Anemone, Shiner Perch, Sunflower Sea Star, Yellowtail Rockfish, beds of algae, Staghorn Sculpin in eelgrass bed).

Site Summaries

Summaries are presented for the seven nearshore biodiversity sites that were surveyed using multiple sampling methods and the 8th nearshore site where the modified intertidal survey was followed (Baird Cliff).

Gilbert Island

Sampling date: May 20th & 22nd, 2024

Surveys conducted: dive, intertidal biodiversity, eDNA water samples, BRUV, drone, beach seine, wildlife camera, shoreline debris.

The Gilbert Island site is characterized by steep bedrock and boulders with some sandy patches on the east side of the site, and a muddy/sandy shallow sloped area on the west side of the site (Figure 23, Figure 24). The main vegetative cover included Fucus and Ulva. A second shoreline debris transect was completed as there was a large amount of debris outside of the original survey area. Fauna detected by these various methods are shown in Table 20. A total of 18 fish, 51 invertebrate, three tunicate, two bird, and one mammal taxa were detected across all methods. eDNA results were only included for taxa detected by at least one other method. The full suite of fish and invertebrate taxa detected using eDNA is found in Appendix 3 and 4.

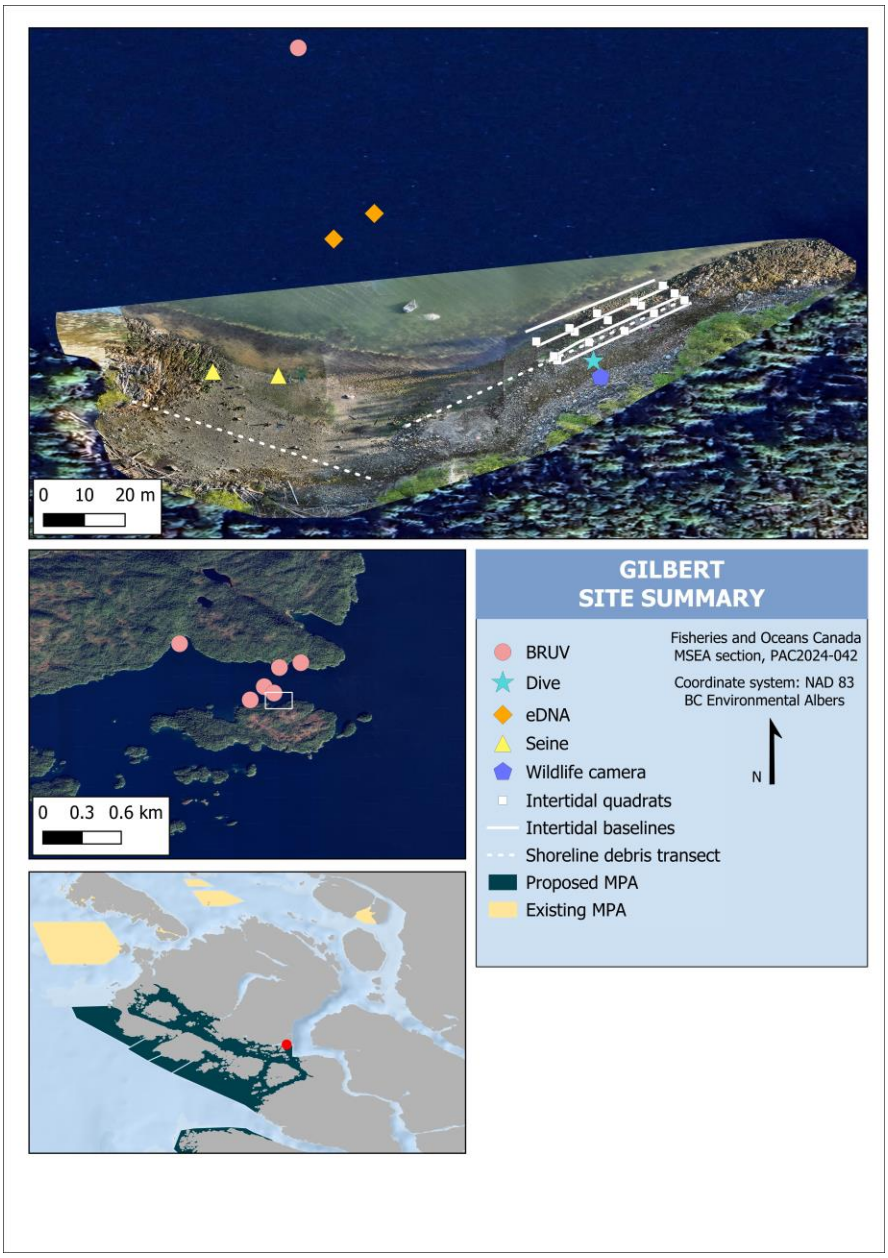


Figure 23. Map of surveys that occurred at Gilbert including drone imagery. The eDNA points represent the locations of eDNA water samples.



Figure 24. Photo of Gilbert survey area.

Table 20. Faunal taxa detected at Gilbert Island site using each survey method. Taxa detected using eDNA are only shown in the table if they were also detected by at least one other method. The full suite of fish and invertebrate taxa detected by eDNA sampling can be found in Appendix 3 and 4.

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV	Wildlife Camera
Annelida	Polychaeta	Dwarf Calcareous Tubeworms	*Pileolaria* sp.	X					
Annelida	Polychaeta	Feather Duster Worm	*Eudistylia vancouveri*	X					
Annelida	Polychaeta	Red Calcareous Tubeworm	*Serpula columbiana*	X					
Annelida	Polychaeta	Sand Tube Worm	*Phragmatopoma californica*	X					
Arthropoda	Malacostraca	Decorator Crab	*Oregonia* sp.	X					
Arthropoda	Malacostraca	Dock/Coonstripe Shrimp	*Pandalus danae*				X		
Arthropoda	Malacostraca	Dungeness or Graceful Crab	*Metacarcinus* sp.					X	
Arthropoda	Malacostraca	Graceful Kelp Crab	*Pugettia gracilis*				X		
Arthropoda	Malacostraca	Graceful Rock Crab	*Metacarcinus gracilis*	X					
Arthropoda	Malacostraca	Hairy Hermit Crab	*Pagurus hirsutiusculus*				X		
Arthropoda	Malacostraca	Helmet Crab	*Telmessus cheiragonus*					X	
Arthropoda	Malacostraca	Hermit Crab	*Paguroidea*	X	X				
Arthropoda	Malacostraca	Kelp Crab	*Pugettia* sp.					X	
Arthropoda	Malacostraca	Rock Crab	*Cancridae*					X	
Arthropoda	Malacostraca	Shrimp	*Pandalus* sp.	X					
Arthropoda	Theocostraca	Common and/or Northern Acorn Barnacles	*Balanus glandula* and/or *Semibalanus balanoides*		X	X			
Arthropoda	Theocostraca	Barnacle	*Cirripedia*		X	X			
Arthropoda	Theocostraca	Crenate Barnacle	*Balanus crenatus*		X	X			
Arthropoda	Theocostraca	Thatched Acorn Barnacle	*Semibalanus cariosus*	X	X				
Bryozoa	Gymnolaemata	Bryozoans Flat		X					
Bryozoa	Gymnolaemata	Bryozoans on Kelp	*Membranipora villosa*	X					
Bryozoa	Gymnolaemata	Crust Bryozoan	*Membranipora* sp.	X					
Bryozoa	Gymnolaemata	Lattice-Work Bryozoan	*Phidolopora pacifica*	X					

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV	Wildlife Camera
Bryozoa	Gymnolaemata	Stick Bryozoan	*Microporina articulata*	X					
Bryozoa	Gymnolaemata	Staghorn Bryozoan (both species)	*Heteropora pacifica* or *Diaperoforma californica*	X					
Bryozoa	Gymnolaemata	White Tuft Bryozoan	*Crisia* sp.	X					
Chordata	Ascidiacea	Broadbase Tunicate	*Cnemidocarpa finmarkiensis*	X					
Chordata	Ascidiacea	Hairy Tunicate	*Boltenia villosa*	X					
Chordata	Ascidiacea	Orange Social Tunicate	*Metandrocarpa taylori*	X					
Chordata	Aves	Coopers Hawk	*Astur cooperii*						X
Chordata	Aves	Corvid sp.	*Corvus* sp.						X
Chordata	Mamalia	Black Tailed Deer	*Odocoileus hemionus columbianus*						X
Chordata	Teleostei	Bay Pipefish	*Syngnathus leptorhynchus*				X		
Chordata	Teleostei	Blackeye Goby	*Rhinogobiops nicholsii*		X			X	
Chordata	Teleostei	Crescent Gunnel	*Pholis laeta*				X		
Chordata	Teleostei	Fluffy Sculpin	*Oligocottus snyderi*				X		
Chordata	Teleostei	Goby	*Gobiidae*					X	
Chordata	Teleostei	Greenling	*Hexagrammidae*		X			X	
Chordata	Teleostei	Lingcod	*Ophiodon elongatus*		X			X	
Chordata	Teleostei	Padded Sculpin	*Artedius fenestralis*		X		X		
Chordata	Teleostei	Penpoint Gunnel	*Apodichthys flavidus*		X		X		
Chordata	Teleostei	Pholidae (juvenile)	*Pholidae* sp.		X		X		
Chordata	Teleostei	Righteye Flounders	*Pleuronectidae*		X			X	
Chordata	Teleostei	Rockweed Gunnel	*Apodichthys fucorum*				X		
Chordata	Teleostei	Sculpin	*Cottidae*		X			X	
Chordata	Teleostei	Staghorn Sculpin	*Leptocottus armatus*		X		X		X
Chordata	Teleostei	Starry Flounder	*Platichthys stellatus*				X		
Chordata	Teleostei	Tidepool Sculpin	*Oligocottus maculosus*		X		X		
Chordata	Teleostei	Tidepool Snailfish	*Liparis florae*				X		
Chordata	Teleostei	White spotted Greenling	*Hexagrammos stelleri*				X	X	

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV	Wildlife Camera
Cnidaria	Hexacorallia	Burrowing Anemone	*Anthopleura artemisia*	X					
Cnidaria	Hexacorallia	Orange Cup Coral	*Balanophyllia elegans*	X					
Cnidaria	Hexacorallia	Tube Dwelling Anemone	*Pachycerianthus fimbriatus*	X					
Cnidaria	Hydrozoa	Hydrozoan		X	X				
Cnidaria	Hydrozoa	Other Hydroid		X	X				
Echinodermata	Asteroidea	Mottled Star	*Evasterias troschelii*	X	X				
Echinodermata	Asteroidea	Sea Star	*Asteriidae*		X			X	
Echinodermata	Asteroidea	Sunflower Sea Star	*Pycnopodia helianthoides*					X	
Echinodermata	Echinoidea	Green Sea Urchin	*Strongylocentrotus droebachiensis*	X	X				
Echinodermata	Holothuroidea	California Sea Cucumber	*Apostichopus californicus*		X			X	
Echinodermata	Holothuroidea	Orange Sea Cucumber	*Cucumaria miniata*	X					
Echinodermata	Holothuroidea	White Sea Cucumbers	*Eupentacta* sp.	X					
Echinodermata	Ophiuroidea	Brittle Star		X					
Mollusca	Bivalvia	Green False Jingle	*Pododesmus macrochisma*	X					
Mollusca	Bivalvia	Horse Clam	*Tresus* sp.	X					
Mollusca	Gastropoda	Blue Topsnail	*Calliostoma ligatum*	X					
Mollusca	Gastropoda	Checkered Periwinkle	*Littorina scutulata*			X			
Mollusca	Gastropoda	Chiton interstinctus	*Lepidozona interstincta*			X			
Mollusca	Gastropoda	Limpet	*Patellogastropoda*		X	X			
Mollusca	Gastropoda	Mask Limpet	*Lottia persona*			X			
Mollusca	Gastropoda	Plate Limpet	*Lottia scutum*		X	X			
Mollusca	Gastropoda	Shield Limpet	*Lottia pelta*		X	X			
Mollusca	Gastropoda	Sitka Periwinkle	*Littorina siktana*		X	X			
Mollusca	Gastropoda	Whitecap Limpet	*Acmaea mitra*	X					
Mollusca	Gastropoda	Chiton	*Tonicella* sp.	X					

Kitkatla Islands

Sampling date: May 21st & 23rd, 2024

Surveys conducted: dive, intertidal, eDNA water samples, BRUV, drone, beach seine, wildlife camera, shoreline debris.

The Kitkatla Island site is at the entrance of a deep, south facing bay on Kitkatla Island that has a mix of has a mix of boulders, mud, and sand (Figure 25, Figure 26). The main vegetative covers were Ulva and Eelgrass. A wildlife camera was set up but no images were recorded due to an operator error. Fauna detected by the various survey methods are shown in Table 21. A total of 18 fish, 47 invertebrate, and one tunicate taxa were detected across all methods. eDNA results were only included for taxa detected by at least one other method. The full suite of fish and invertebrate taxa detected using eDNA is found in Appendix 3 and 4.

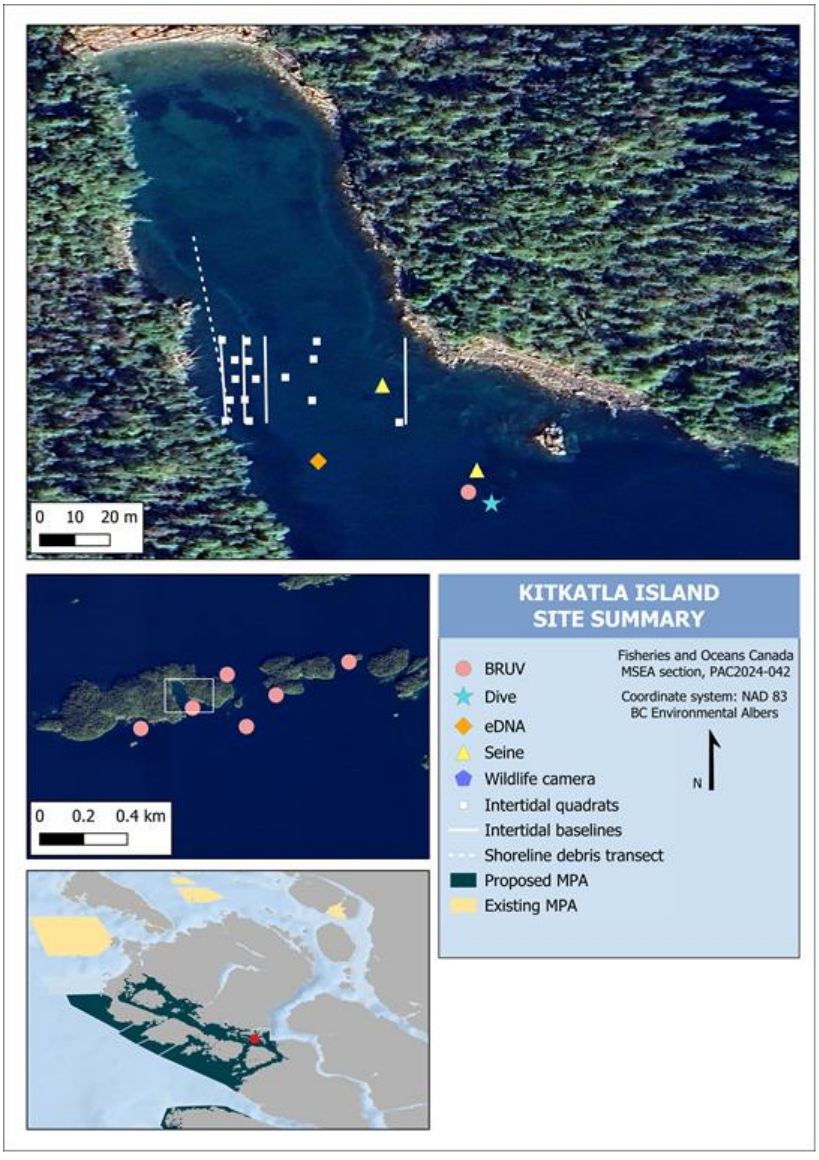


Figure 25. Map of surveys that occurred at Kitkatla Islands. Drone orthomosaic was not available for this site. The one eDNA point represents the location of an eDNA water sample.



Figure 26. Photo of Kitkatla Islands survey area.

Table 21. Faunal taxa detected at Kitkatla Islands site using each survey method. Taxa detected using eDNA are only shown in the table if they were also detected by at least one other method. The full suite of fish and invertebrate taxa detected by eDNA sampling can be found in Appendix 3 and 4.

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV
Annelida	Polychaeta	Cellophane Tube Worm	*Spiochaetopterus costarum*	X				
Annelida	Polychaeta	Dwarf Calcareous Tubeworms	*Pileolaria* sp.	X				
Annelida	Polychaeta	Feather Duster Worm	*Eudistylia vancouveri*	X				
Annelida	Polychaeta	Other Worm		X				
Annelida	Polychaeta	Red Calcareous Tubeworm	*Serpula columbiana*	X				
Annelida	Polychaeta	Sand Tube Worm	*Phragmatopoma californica*	X				
Annelida	Polychaeta	Slime Feather Duster Worm	*Myxicola infundibulum*	X				
Annelida	Polychaeta	Tube Worm – Decorated Tub		X				
Arthropoda	Malacostraca	Crangon Shrimp	*Crangon crangon*				X	
Arthropoda	Malacostraca	Decorator Crab	*Oregonia* sp.	X				
Arthropoda	Malacostraca	Dock/Coonstripe Shrimp	*Pandalus danae*				X	
Arthropoda	Malacostraca	Graceful Decorator Crab	*Oregonia gracilis*				X	
Arthropoda	Malacostraca	Hermit Crab	*Paguroidea*	X				
Arthropoda	Malacostraca	Kelp crab	*Pugettia* sp.					X
Arthropoda	Malacostraca	Rock crab	*Cancridae*					X
Arthropoda	Theocostraca	Common and/or Northern Acorn Barnacles	*Balanus glandula* and/or *Semibalanus balanoides*		X	X		
Arthropoda	Theocostraca	Crenate Barnacle	*Balanus crenatus*	X	X			
Arthropoda	Theocostraca	Barnacle	*Cirripedia*		X	X		
Bryozoa	Gymnolaemata	Fan Bryozoan	*Dendrobeania murrayana*	X				
Bryozoa	Gymnolaemata	Stick Bryozoan	*Microporina articulata*	X				
Chordata	Ascidiacea	Orange Social Tunicate	*Metandrocarpa taylori*	X				
Chordata	Teleostei	Black Rockfish	*Sebastes melanops*					X
Chordata	Teleostei	Buffalo Sculpin	*Enophrys bison*		X		X	
Chordata	Teleostei	Cockscomb	*Anoplarchus* sp.		X			X
Chordata	Teleostei	Crescent Gunnel	*Pholis laeta*				X	

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV
Chordata	Teleostei	Fluffy Sculpin	*Oligocottus snyderi*				X	
Chordata	Teleostei	Greenling	*Hexagrammidae*		X			X
Chordata	Teleostei	Kelp Greenling	*Hexagrammos decagrammus*		X			X
Chordata	Teleostei	Kelp Pipefish	*Syngthus leptorhynchus*					X
Chordata	Teleostei	Padded Sculpin	*Artedius fenestralis*		X		X	
Chordata	Teleostei	Painted Greenling	*Oxylebius pictus*					X
Chordata	Teleostei	Sculpin	*Cottidae*		X			X
Chordata	Teleostei	Smoothhead Sculpin	*Artedius lateralis*		X		X	
Chordata	Teleostei	Speckled Sanddab	*Citharichthys stigmaeus*				X	
Chordata	Teleostei	Staghorn Sculpin	*Leptocottus armatus*		X			X
Chordata	Teleostei	Starry Flounder	*Platichthys stellatus*				X	
Chordata	Teleostei	Tidepool Sculpin	*Oligocottus maculosus*		X		X	
Chordata	Teleostei	White spotted Greenling	*Hexagrammos stelleri*				X	X
Chordata	Teleostei	Yellowtail Rockfish	*Sebastes flavidus*					X
Cnidaria	Hexacorallia	Tube Dwelling Anemone	*Pachycerianthus fimbriatus*	X				
Cnidaria	Hexacorallia	Sea Pen	*Ptilosarcus gurneyi*	X				
Echinodermata	Asteroidea	Common Sea Star	*Crossaster papposus*					X
Echinodermata	Asteroidea	Leather Sea Star	*Dermasterias imbricata*					X
Echinodermata	Asteroidea	Mottled Star	*Evasterias troschelii*		X	X		
Echinodermata	Asteroidea	Painted Star	*Orthasterias koehleri*	X				
Echinodermata	Echinoidea	Purple Sea Urchin	*Strongylocentrotus purpuratus*					X
Echinodermata	Echinoidea	Red Sea Urchin	*Mesocentrotus franciscanus*		X			X
Echinodermata	Echinoidea	Sea Urchin	*Strongylocentrotus* sp.		X			X
Echinodermata	Holothuroidea	Flat Yellow Sea Cucumber		X				
Echinodermata	Holothuroidea	White Sea Cucumber	*Eupentacta* sp.	X				
Mollusca	Bivalvia	Bent-nose Macoma	*Macoma nasuta*		X	X		
Mollusca	Bivalvia	Blue Mussel	*Mytilus* sp.		X	X		
Mollusca	Bivalvia	Butter Clam	*Saxidomus gigantea*		X	X		

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV
Mollusca	Bivalvia	Cockle	*Clinocardium nuttalli*		X	X		
Mollusca	Bivalvia	Divariate Nut Clam	*Acila castrensis*	X				
Mollusca	Bivalvia	Pointed Macoma	*Macoma inquinata*			X		
Mollusca	Gastropoda	Blue Topsnail	*Calliostoma ligatum*	X				
Mollusca	Gastropoda	Checkered Periwinkle	*Littorina scutulata*		X	X		
Mollusca	Gastropoda	Leafy Hornmouth	*Ceratostoma foliatum*	X				
Mollusca	Gastropoda	Limpet	*Patellogastropoda*		X	X		
Mollusca	Gastropoda	Mask Limpet	*Lottia persona*			X		
Mollusca	Gastropoda	Plate Limpet	*Lottia scutum*		X	X		
Mollusca	Gastropoda	Puppet Margarite	*Margarites pupillus*	X	X			
Mollusca	Gastropoda	Shield Limpet	*Lottia pelta*			X		
Mollusca	Gastropoda	Sitka Periwinkle	*Littorina siktana*		X	X		
Mollusca	Polyplacophora	Chiton	*Tonicella* sp.	X				

Kitkatla Creek

Sampling date: May 24th, 2024

Surveys conducted: dive, intertidal, eDNA water samples, BRUV, drone, beach seine, eDNA sand sample, shoreline debris.

The Kitkatla Creek site consists of a sandy, shallow, west facing bay with a small tombolo dividing the site (Figure 27**,** Figure 28). The northern side of the bay has a stream; however, all of the surveys were done on the southern side. Seagrass was present in the lower intertidal region where the beach seine surveys were completed. This site was added to the original planned list of sites based on interest from the Gitxaała Nation. Fauna detected by the various survey methods are shown in Table 22. A total of 12 fish and 24 invertebrate taxa were detected across all methods. eDNA results were only included for taxa detected by at least one other method. The full suite of fish and invertebrate taxa detected using eDNA is found in Appendix 3 and 4.

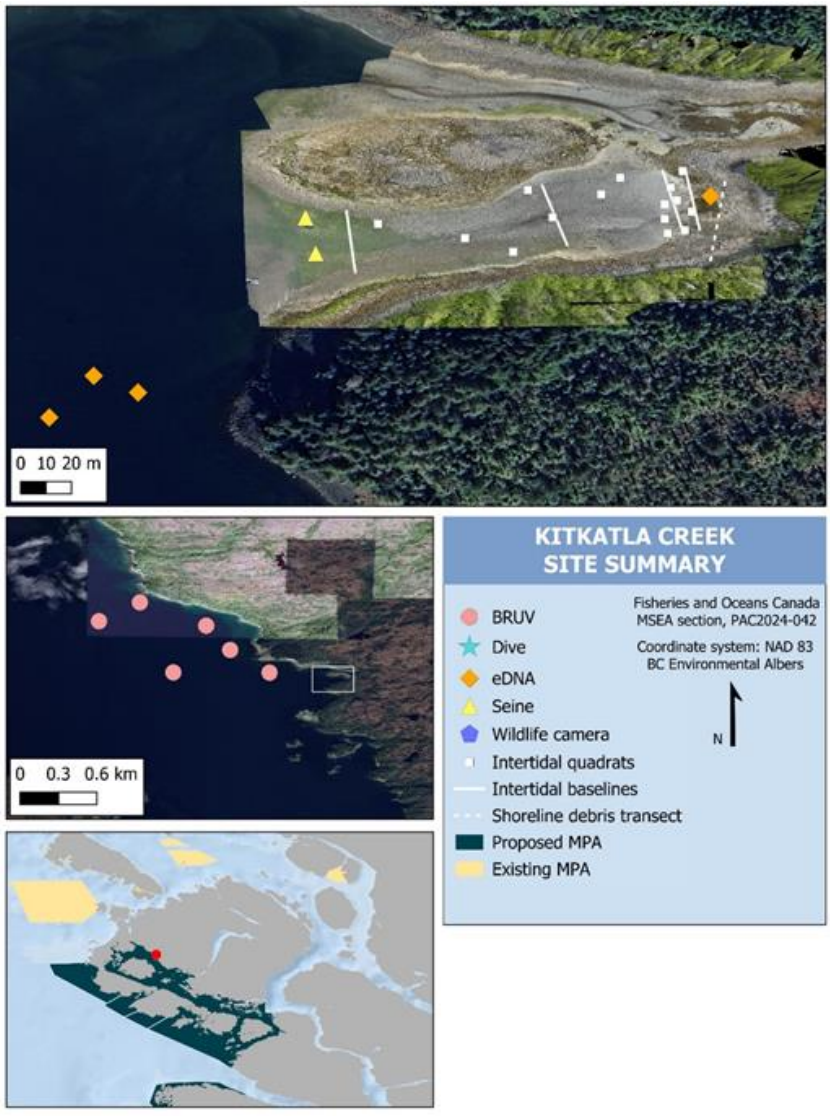


Figure 27. Map of surveys at Kitkatla Creek including drone imagery. The eDNA point on the intertidal area shows the location of the eDNA sand sample, while eDNA points over the water show locations of eDNA water samples.



Figure 28. Photo of Kitkatla Creek survey area.

Table 22. Faunal taxa detected at Kitkatla Creek site using each survey method. Taxa detected using eDNA are only shown in the table if they were also detected by at least one other method. The full suite of fish and invertebrate taxa detected by eDNA sampling can be found in Appendix 3 and 4.

Phylum	Class	Common name	Taxon	eDNA	Intertidal	Beach Seine	BRUV
Arthropoda	Malacostraca	Crangon Shrimp	*Crangon crangon*			X	
Arthropoda	Malacostraca	Dock/Coonstripe Shrimp	*Pandalus danae*			X	
Arthropoda	Malacostraca	Dungeness Crab	*Metacarcinus magister*			X	x
Arthropoda	Malacostraca	Dungeness or Graceful crab	*Metacarcinus* sp.				x
Arthropoda	Malacostraca	Hairy Hermit Crab	*Paguras hirsutrusculus*	X	X	X	
Arthropoda	Malacostraca	Helmet Crab	*Cheiragonidae* sp.			X	
Arthropoda	Malacostraca	Hermit Crab	*Pagurus* sp.		X		
Arthropoda	Malacostraca	Hippolyte Shrimp	*Hippolyte* sp.			X	
Arthropoda	Malacostraca	Kelp Isopod	*Pentidotea wosnesenskii*			X	
Arthropoda	Malacostraca	Red Rock Crab	*Cancer productus*				X
Arthropoda	Malacostraca	Rock Crab	*Cancridae*				X
Arthropoda	Theocostraca	Common and/or Northern Acorn Barnacles	*Balanus glandula* and/or *Semibalanus balanoides*	X	X		
Arthropoda	Theocostraca	Barnacle	*Cirripedia*	X	X		
Chordata	Teleostei	Buffalo Sculpin	*Enophrys bison*	X		X	
Chordata	Teleostei	Crescent Gunnel	*Pholis laeta*	X		X	
Chordata	Teleostei	Great Sculpin	*Myoxocephalus polyacanthocephalus*			X	
Chordata	Teleostei	Greenling	*Hexagrammidae*	X			X
Chordata	Teleostei	Padded Sculpin	*Artedius fenestralis*	X		X	
Chordata	Teleostei	Righteye Flounders	*Pleuronectidae*	X			X
Chordata	Teleostei	Shiner Perch	*Cymatogaster aggregata*	X			X
Chordata	Teleostei	Staghorn Sculpin	*Leptocottus armatus*	X		X	X
Chordata	Teleostei	Starry Flounder	*Platichthys stellatus*			X	
Chordata	Teleostei	Tidepool Sculpin	*Oligocottus maculosus*	X		X	
Chordata	Teleostei	Tubesnout Poacher	*Pallasina barbata*			X	
Chordata	Teleostei	White spotted Greenling	*Hexagrammos stelleri*			X	X

Phylum	Class	Common name	Taxon	eDNA	Intertidal	Beach Seine	BRUV
Mollusca	Bivalvia	Bent-nose Macoma	*Macoma nasuta*	X	X		
Mollusca	Bivalvia	Butter Clam	*Saxidomus gigantea*	X	X		
Mollusca	Bivalvia	Cockle	*Clinocardium nuttalli*	X	X		
Mollusca	Bivalvia	Mussel	*Mytilus sp.*		X		
Mollusca	Bivalvia	Pacific Littleneck Clam	*Leukoma staminea*		X		
Mollusca	Bivalvia	Pointed Macoma	*Macoma inquinata*		X		
Mollusca	Bivalvia	Softshell	*Mya arenaria*	X	X		
Mollusca	Gastropoda	Checkered Periwinkle	*Littorina scutulata*		X		
Mollusca	Gastropoda	Mask Limpet	*Lottia persona*		X		
Mollusca	Gastropoda	Shield Limpet	*Lottia pelta*	X	X		
Mollusca	Gastropoda	Sitka Periwinkle	*Littorina siktana*	X	X		

Baird Point

Sampling date: May 20th & 25th, 2024

Surveys conducted: dive, intertidal, eDNA water samples, BRUV, drone, beach seine, wildlife camera, eDNA sand sample, shoreline debris.

The Baird Point site includes the rocky intertidal isthmus connecting the mainland of McCauley Island to the to the rocky outcrop on the western most part of the island called Baird Point (Figure 29**,** Figure 30). The Baird Point site has a shallow slope and exposed bedrock with patches of coarse sand, shell hash, gravel, Eelgrass, and Alaria. Baird Point was added when the initial visit to Baird Cliff deemed the site too exposed to complete all the survey methods. As such, the full suite of surveys were completed at Baird Point to characterize the local biodiversity. Fauna detected by the surveys at Baird Point are documented in Table 23. No fauna were observed using the wildlife cameras. A total of 16 fish, one sea squirt, and 73 invertebrate taxa were detected across all other methods. eDNA results were only included for taxa detected by at least one other method. The full suite of fish and invertebrate taxa detected using eDNA is found in Appendix 3 and 4.

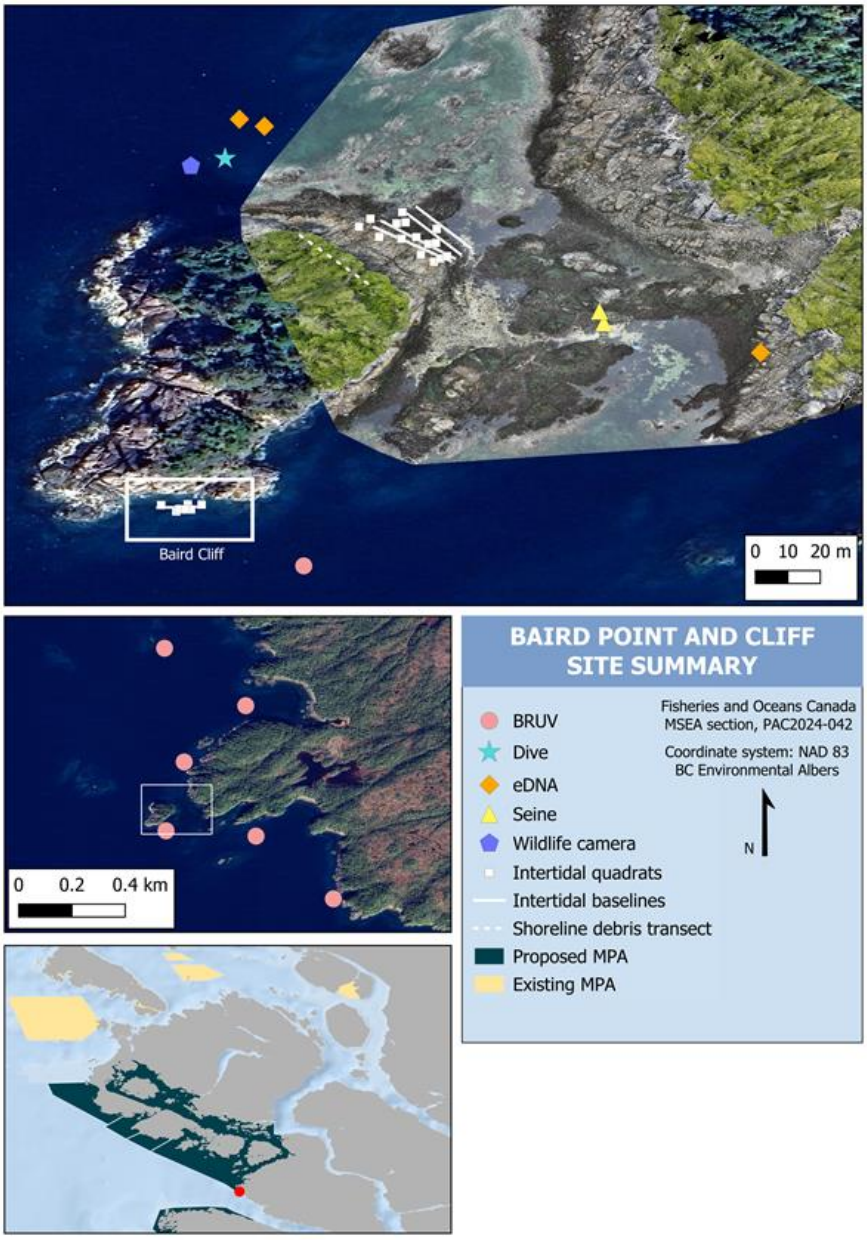


Figure 29. Map of surveys that occurred at Baird Cliff and Baird Point including drone imagery of Baird Point. The eDNA point on the intertidal area shows the location of the eDNA sand sample, while the eDNA points over the water show the locations of the eDNA water samples.



Figure 30. Photo of Baird Point survey area.

Table 23. Faunal taxa detected at Baird Point site using each survey method. Taxa detected using eDNA are only shown in the table if they were also detected by at least one other method. The full suite of fish and invertebrate taxa detected by eDNA sampling can be found in Appendix 3 and 4.

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV
Annelida	Polychaeta	Cellophane Tube Worm	*Spiochaetopterus costarum*	X				
Annelida	Polychaeta	Coralline-Encased Filament-Worm	*Dodecaceria concharum*	X				
Annelida	Polychaeta	Dwarf Calcareous Tubeworms	*Pileolaria* sp.	X				
Annelida	Polychaeta	Feather Duster Worm	*Eudistylia vancouveri*	X				
Annelida	Polychaeta	Red Calcareous Tubeworm	*Serpula columbiana*	X				
Annelida	Polychaeta	Sand Tube Worm	*Phragmatopoma californica*	X				
Annelida	Polychaeta	Spaghetti Worm	*Thelepus crispus*	X				
Arthropoda	Malacostraca	Euphausiacea	*Meganictyphanes norvegica*				X	
Arthropoda	Malacostraca	Graceful Kelp Crab	*Pugettia gracilis*		X		X	
Arthropoda	Malacostraca	Greenmark Hermit	*Pagurus caurinus*				X	
Arthropoda	Malacostraca	Hairy Hermit Crab	*Pagurus hirsutiusculus*			X	X	
Arthropoda	Malacostraca	Heptacarpus Shrimp	*Heptacarpus* sp.				X	
Arthropoda	Malacostraca	Hermit Crab	*Paguroidea*	X				
Arthropoda	Malacostraca	Hermit Crab	*Pagurus* sp.		X	X		
Arthropoda	Malacostraca	Hippolyte Shrimp	*Hippolyte* sp.				X	
Arthropoda	Malacostraca	Kelp Isopod	*Pentidotea wosnesenskii*				X	
Arthropoda	Malacostraca	Rock Crab	*Cancridae*					X
Arthropoda	Malacostraca	Rockweed Isopod	*Lodotea wosnesenskii*			X		
Arthropoda	Theocostraca	Acorn Common and/or Northern Acorn Barnacles	*Balanus glandula* and/or *Semibalanus balanoides*	X	X	X		
Arthropoda	Theocostraca	Barnacle	*Cirripedia*		X	X		
Arthropoda	Theocostraca	Little Brown Barnacle	*Chthamalus dalli*		X	X		
Arthropoda	Theocostraca	Thatched Barnacle	*Semibalanus cariosus*		X	X		
Bryozoa		Bryozoan	*Bryozoa*		X	X		

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV
Bryozoa	Gymnolaemata	Staghorn Bryozoan (both species)	*Heteropora pacifica* or *Diaperoforma californica*	X				
Bryozoa	Gymnolaemata	White Tuft Bryozoan	*Crisia* sp.	X				
Chordata	Ascidiacea	Broad Base Sea Squirt	*Cnemidocarpe finmarkiensis*	X		X		
Chordata	Holocephali	Spotted Ratfish	*Hydrolagus colliei*		X			X
Chordata	Teleostei	Copper Rockfish	*Sebastes caurinus*					X
Chordata	Teleostei	Crescent Gunnel	*Pholis laeta*		X		X	
Chordata	Teleostei	Fluffy Sculpin	*Oligocottus snyderi*				X	
Chordata	Teleostei	Greenling	*Hexagrammidae*		X			X
Chordata	Teleostei	Kelp Greenling	*Hexagrammos decagrammus*		X			X
Chordata	Teleostei	Lingcod	*Ophiodon elongatus*		X			X
Chordata	Teleostei	Pacific Halibut	*Hippoglossus stenolepis*					X
Chordata	Teleostei	Padded Sculpin	*Artedius fenestralis*		X		X	
Chordata	Teleostei	Penpoint Gunnel	*Apodichthys flavidus*		X		X	
Chordata	Teleostei	Northern Ronquil	*Ronquilus jordani*		X			X
Chordata	Teleostei	Righteye Flounder	*Pleuronectidae*		X			X
Chordata	Teleostei	Rock Greenling	*Hexagrammos lagocephalus*				X	
Chordata	Teleostei	Silver Spotted Sculpin	*Blepsias cirrhosus*				X	
Chordata	Teleostei	Snailfish	*Liparis* sp.				X	
Chordata	Teleostei	Tidepool Sculpin	*Oligocottus maculosus*		X		X	
Cnidaria	Anthozoa	Giant Plumose Anemone	*Metridium farcimen*					X
Cnidaria	Hexacorallia	Orange Cup Coral	*Balanophyllia elegans*	X				
Cnidaria	Hexacorallia	Tan and Brown Cup Coral	*Carylophillidae (*includes *Paracyathus stearnsi, Caryophyllia alaskensis)*	X				
Cnidaria	Hexacorallia	Tube Dwelling Anemone	*Pachycerianthus fimbriatus*	X				
Cnidaria	Hydrozoa	Hydrozoans		X	X			
Cnidaria	Hydrozoa	Pink Mouth Hydroid	*Tubularia* sp.	X				
Echinodermata	Asteroidea	Leather Star	*Dermasterias imbricata*	X	X			
Echinodermata	Asteroidea	Mottled Star	*Evasterias troschelii*	X	X			

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV
Echinodermata	Asteroidea	Ochre Star	*Pisaster ochraceus*	X	X			
Echinodermata	Echinoidea	Green Sea Urchin	*Strongylocentrotus droebachiensis*	X	X			X
Echinodermata	Echinoidea	Red Sea Urchin	*Mesocentrotus franciscanus*	X	X	X		X
Echinodermata	Echinoidea	Sea Urchin	*Strongylocentrotus* sp.		X			X
Echinodermata	Holothuroidea	California Sea Cucumber	*Apostichopus californicus*	X	X			X
Echinodermata	Holothuroidea	Orange Sea Cucumber	*Cucumaria minata*		X	X		X
Echinodermata	Holothuroidea	Sea Cucumber	*Cucumaria* sp.		X			X
Echinodermata	Holothuroidea	Tiny Black Sea Cucumber	*Cucumaria vegae*		X	X		
Echinodermata	Holothuroidea	White Sea Cucumber	*Eupentacta* sp.	X				
Mollusca	Gastropoda	Bittium Snail (Needle Whelk)	*Bittium* sp.	X		X		
Mollusca	Gastropoda	Blue Topsnail	*Calliostoma ligatum*	X				
Mollusca	Gastropoda	Calliostoma Snail	*Calliostoma* sp.			X		
Mollusca	Gastropoda	Checkered Periwinkle	*Littorina scutulata*			X		
Mollusca	Gastropoda	Emarginate Dogwinkle	*Nucella emarginata*	X				
Mollusca	Gastropoda	Frilled Dogwinkle	*Nucella lamellosa*	X		X		
Mollusca	Gastropoda	Horned Nudibranch (Opalescent Nudibranch)	*Hermissenda crassicornis*	X		X		
Mollusca	Gastropoda	Leafy Hornmouth	*Ceratostoma foliatum*	X				
Mollusca	Gastropoda	Leather Limpet	*Onchidella borealis*			X		
Mollusca	Gastropoda	Lemon Dark Bumps Nudibranch		X				
Mollusca	Gastropoda	Lepidozona Chiton	*Lepidozona* sp.			X		
Mollusca	Gastropoda	Limpet	*Patellogastropoda*		X	X		
Mollusca	Gastropoda	Lined Chiton	*Tonicella lineata*		X	X		
Mollusca	Gastropoda	Littorina Snail/Periwinkle	*Littorina* sp.	X	X	X		
Mollusca	Gastropoda	Mask Limpet	*Lottia persona*			X		
Mollusca	Gastropoda	Monterey Sea-Lemon	*Doris montereyensis*	X				
Mollusca	Gastropoda	Plate/Mask Limpet	*Lottia scutum*	X	X			
Mollusca	Gastropoda	Purple Ringed Topsnail	*Calliostoma annulatum*	X				

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV
Mollusca	Gastropoda	Red Turban Snail	*Pomaulax gibberosus*	X				
Mollusca	Gastropoda	Rough Keyhole Limpet	*Diodora aspera*	X				
Mollusca	Gastropoda	Shield Limpet	*Lottia pelta*	X		X		
Mollusca	Gastropoda	Sitka Periwinkle	*Littorina siktana*		X	X		
Mollusca	Gastropoda	Tegula Snail	*Tegula* sp.		X	X		
Mollusca	Gastropoda	Whitecap Limpet	*Acmaea mitra*	X	X			
Mollusca	Gastropoda	Wrinkled Dove Snail	*Amphissa columbiana*	X	X	X		
Mollusca	Gastropoda	Black Leather Chiton	*Katharina tunicata*	X		X		
Mollusca	Gastropoda	Chiton	*Tonicella* sp.	X	X			
Mollusca	Gastropoda	Gumboot Chiton	*Cryptochiton stelleri*	X				
Phoronida		Phoronids		X	X			
Porifera	Demospongiae	Other Sponge Flat		X	X			
Porifera	Demospongiae	Sponge Flat		X	X			

Baird Cliff
Sampling date: May 25th, 2024

Surveys conducted: modified intertidal survey

The Baird Cliff site is on the southern facing portion of the rocky outcrop that is Baird Point and is characterized by a steep and narrow bedrock shore (Figure 29**,** Figure 31). This site was too exposed to complete the full suite of surveys at, and only an intertidal survey that was modified for the steep and exposed terrain was completed here. Fauna detected in the intertidal survey are documented in Table 24 and include a total of 13 invertebrate taxa.



Figure 31. Photo of Baird Cliff survey area.

Table 24. Faunal taxa detected at Baird Cliff site using a modified intertidal survey.

Phylum	Class	Common name	Taxon	Intertidal
Arthropoda	Theocostraca	Barnacle	*Cirripedia*	X
Arthropoda	Theocostraca	Little Brown Barnacle	*Chthamalus dalli*	X
Chordata	Ascidiacea	Orange Social Tunicate	*Ascidiacea*	X
Cnidaria	Hexacorallia	Green Anemone	*Anthopleura* sp.	X
Echinodermata	Asteroidea	Ochre Sea Star	*Pisaster ochraceus*	X
Echinodermata	Holothuroidea	Orange Sea Cucumber	*Cucumaria minata*	X
Mollusca	Gastropoda	Black Leather Chiton	*Katharina tunicata*	X
Mollusca	Gastropoda	Blue Topsnail	*Calliostoma ligatum*	X
Mollusca	Gastropoda	Dire Whelk	*Lirabuccinum dirum*	X
Mollusca	Gastropoda	Frilled Dogwinkle	*Nucella lamellosa*	X
Mollusca	Gastropoda	Limpet		X
Mollusca	Gastropoda	Plate Limpet	*Lottia scutum*	X
Mollusca	Gastropoda	Shield Limpet	*Lottia pelta*	X

Head of Kitkatla Inlet
Sampling date: May 18th & 26th, 2024

Surveys conducted: dive, intertidal, eDNA water samples, BRUV, drone, beach seine, wildlife camera, eDNA sand sample, shoreline debris.

The Head of Kitkatla Inlet site is a small, south-west facing bay characterized by coarse sand, pea gravel, shell hash substrate with larger substrate at higher intertidal zones (Figure 32, Figure 33). Two rocky outcrops with tombolo's frame the small bay on the northern and southern edges. Fauna detected by the surveys at the Head of Kitkatla site are documented in Table 25. A total of 19 fish, one bird, 46 invertebrate, and one tunicate taxa were detected across all methods. eDNA results were only included for taxa detected by at least one other method. The full suite of fish and invertebrate taxa detected using eDNA is found in Appendix 3 and 4.

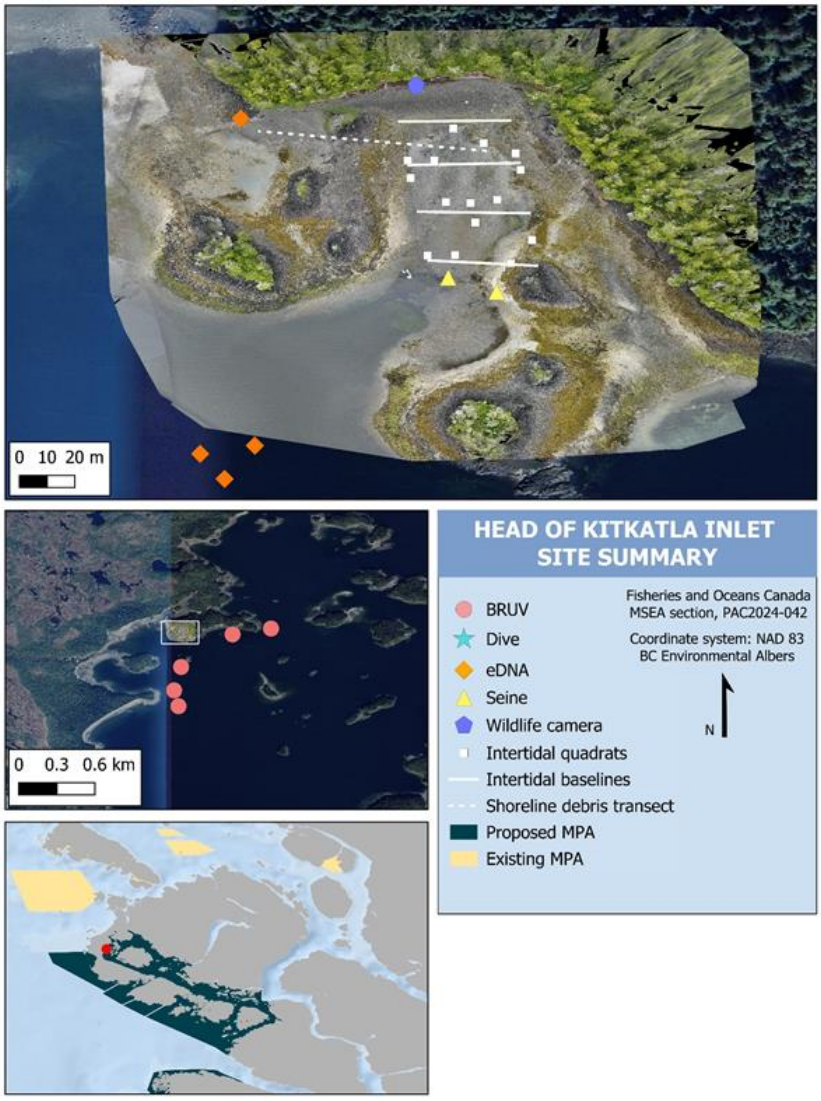


Figure 32. Map of surveys that occurred at the Head of Kitkatla Inlet site including drone imagery. The eDNA point on the intertidal area shows the location of the eDNA sand sample, while the eDNA points over the water show the locations of the eDNA water samples.



Figure 33. Photo of the Head of Kitkatla Inlet site survey area.

Table 25. Faunal taxa detected at the Head of Kitkatla Inlet site using each survey method. Taxa detected using eDNA are only shown in the table if they were also detected by at least one other method. The full suite of fish and invertebrate taxa detected by eDNA sampling can be found in Appendix 3 and 4.

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV	Wildlife Camera
Annelida	Polychaeta	Dwarf Calcareous Tubeworms	*Pileolaria* sp.	X					
Annelida	Polychaeta	Feather Duster Worm	*Eudistylia vancouveri*	X					
Annelida	Polychaeta	Red Calcareous Tubeworm	*Serpula columbiana*	X					
Arthropoda	Malacostraca	Crangon Shrimp	*Crangon crangon*				X		
Arthropoda	Malacostraca	Crangon Shrimp	*Crangon* sp.	X					
Arthropoda	Malacostraca	Dock/Coonstripe Shrimp	*Pandalus danae*	X			X		
Arthropoda	Malacostraca	Dungeness Crab	*Metacarcinus magister*				X	X	
Arthropoda	Malacostraca	Dungeness or Graceful crab	*Metacarcinus* sp.					X	
Arthropoda	Malacostraca	Helmet Crab	*Telmessus cheiragonus*					X	
Arthropoda	Malacostraca	Rock Crab	*Cancridae*					X	
Arthropoda	Malacostraca	Graceful Decorator Crab	*Oregonia gracilis*				X		
Arthropoda	Malacostraca	Hairy Hermit Crab	*Paguras hirsutrusculus*			X	X		
Arthropoda	Malacostraca	Helmet Crab	*Cheiragonidae* sp.				X		
Arthropoda	Malacostraca	Hermit Crab	*Pagurus* sp.			X			
Arthropoda	Malacostraca	Hermit Crab	*Paguroidea*	X					
Arthropoda	Malacostraca	Kelp Isopod	*Pentidotea wosnesenskii*				X		
Arthropoda	Malacostraca	Red Rock Crab	*Cancer productus*	X				X	
Arthropoda	Theocostraca	Common and/or Northern Acorn Barnacles	*Balanus glandula* and/or *Semibalanus balanoides*		X	X			
Arthropoda	Theocostraca	Barnacle	*Cirripedia*		X	X			
Bryozoa	Gymnolaemata	Bryozoans on Kelp	*Membranipora villosa*	X					
Bryozoa	Stenolaemata	White Tuft Bryozoan	*Crisia* sp.	X					
Chordata	Ascidiacea	Bristly Tunicate	*Halocynthia igaboja*	X					
Chordata	Aves	Unidentified ducks							X
Chordata	Teleostei	Buffalo Sculpin	*Enophrys bison*		X		X		
Chordata	Teleostei	Crescent Gunnel	*Pholis laeta*		X		X		

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV	Wildlife Camera
Chordata	Teleostei	Dover Sole	*Microstomus pacificus*		X			X	
Chordata	Teleostei	Greenling	*Hexagrammidae*		X			X	
Chordata	Teleostei	Kelp Greenling	*Hexagrammos decagrammus*		X			X	
Chordata	Teleostei	Padded Sculpin	*Artedius fenestralis*		X		X		
Chordata	Teleostei	Righteye Flounder	*Pleuronectidae*		X			X	
Chordata	Teleostei	Sculpin	*Cottidae*		X			X	
Chordata	Teleostei	Shiner Perch	*Cymatogaster aggregata*		X			X	
Chordata	Teleostei	Smoothhead Sculpin	*Artedius lateralis*		X		X		
Chordata	Teleostei	Snake Prickleback	*Lumpenus sagitta*				X		
Chordata	Teleostei	Staghorn Sculpin	*Leptocottus armatus*		X		X	X	
Chordata	Teleostei	Starry Flounder	*Platichthys stellatus*		X		X	X	
Chordata	Teleostei	Stickleback	*Gasterosteidae* sp.		X		X		
Chordata	Teleostei	Striped Surfperch	*Embiotoca lateralis*					X	
Chordata	Teleostei	Surfperch	*Embiotocidae*		X			X	
Chordata	Teleostei	Tidepool Sculpin	*Oligocottus maculosus*				X		
Chordata	Teleostei	Tubesnout	*Aulorhynchus flavidus*		X			X	
Chordata	Teleostei	Whitespotted Greenling	*Hexagrammos stelleri*					X	
Cnidaria	Hydrozoa	Hydrozoan		X	X				
Cnidaria	Hydrozoa	Other Hydroid		X	X				
Echinodermata	Asteroidea	Mottled Star	*Evasterias troschelii*	X	X				
Echinodermata	Holothuroidea	California Sea Cucumber	*Apostichopus californicus*	X	X				
Echinodermata	Ophiuroidea	Brittle Star		X	X				
Mollusca	Bivalvia	Bent-nose Macoma	*Macoma nasuta*		X	X			
Mollusca	Bivalvia	Butter clam	*Saxidomus gigantea*		X	X			
Mollusca	Bivalvia	Cockle	*Clinocardium nuttalli*		X	X			
Mollusca	Bivalvia	Horse Clam	*Tresus* sp.	X	X				
Mollusca	Bivalvia	Mussel	*Mytilus* sp.		X	X			

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV	Wildlife Camera
Mollusca	Bivalvia	Pacific Littleneck Clam	*Leukoma staminea*	X	X	X			
Mollusca	Bivalvia	Pointed Macoma	*Macoma inquinata*			X			
Mollusca	Bivalvia	White Sand Macoma	*Macoma secta*			X			
Mollusca	Gastropoda	Blue Topsnail	*Calliostoma ligatum*						
Mollusca	Gastropoda	Checkered Periwinkle	*Littorina scutulata*			X			
Mollusca	Gastropoda	Littorina Snail/Periwinkle	*Littorina* sp.		X	X			
Mollusca	Gastropoda	Mask Limpet	*Lottia persona*			X			
Mollusca	Gastropoda	Northern Striped Dogwinkle	*Nucella ostrina*		X	X			
Mollusca	Gastropoda	Shield Limpet	*Lottia pelta*	X		X			
Mollusca	Gastropoda	Sitka Periwinkle	*Littorina siktana*		X	X			
Mollusca	Gastropoda	Tusk Shell	*Scaphopoda*			X			
Mollusca	Gastropoda	Woody Chiton	*Mopalia lignosa*			X			
Mollusca	Gastropoda	Chiton	*Tonicella* sp.	X	X	X			
Porifera	Demospongiae	Other Sponge Flat		X	X				
Porifera	Demospongiae	Sponge Flat		X	X				

Between Inlets

Sampling date: May 18th & 27th, 2024

Surveys conducted: dive, intertidal, eDNA water samples, BRUV, drone, beach seine, wildlife camera, eDNA sand sample, shoreline debris.

The Between Inlets site is an open, south-west facing bay characterized by cobble and some soft sediment patches that transition to larger boulders at higher intertidal zones (Figure 34, Figure 35). Fauna detected by the surveys at the Between Inlets site are documented in Table 26. No fauna were observed by the wildlife cameras. A total of 10 fish and 43 invertebrate taxa were detected across all other methods. eDNA results were only included for taxa detected by at least one other method. The full suite of fish and invertebrate taxa detected using eDNA is found in Appendix 3 and 4.

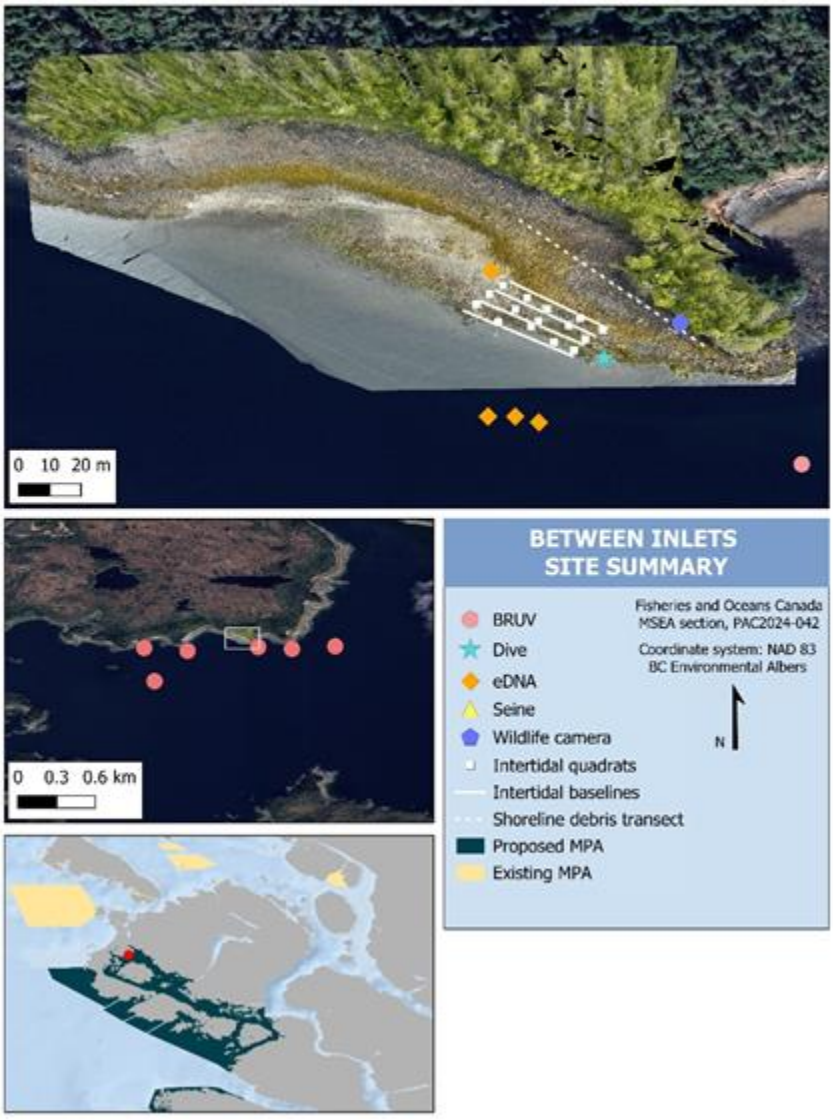


Figure 34. Map of surveys that occurred at Between Inlets including drone imagery of the site. The eDNA point on the intertidal area shows the location of the eDNA sand sample, while the eDNA points over the water show the locations of the eDNA water samples.



Figure 35. Photo of Between Inlets survey area.

Table 26. Faunal taxa detected at Between Inlets site using each survey method. Taxa detected using eDNA are only shown in the table if they were also detected by at least one other method. The full suite of fish and invertebrate taxa detected by eDNA sampling can be found in Appendix 3 and 4.

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV
Annelida	Polychaeta	Dwarf Calcareous Tubeworms	*Pileolaria* sp.	X				
Annelida	Polychaeta	Sand Tube Worm	*Phragmatopoma californica*	X				
Arthropoda	Malacostraca	Crangon Shrimp	*Crangon* sp.	X				
Arthropoda	Malacostraca	Dock/Coonstripe Shrimp	*Pandalus danae*				X	
Arthropoda	Malacostraca	Dungeness Crab	*Metacarcinus magister*					X
Arthropoda	Malacostraca	Dungeness or Graceful Crab	*Metacarcinus* sp.					X
Arthropoda	Malacostraca	Hairy Hermit Crab	*Pagurus hirsutiusculus*		X		X	
Arthropoda	Malacostraca	Helmet Crab	*Cheiragonidae* sp.				X	
Arthropoda	Malacostraca	Helmet Crab	*Telmessus cheiragonus*	X				X
Arthropoda	Malacostraca	Hermit Crab	*Paguroidea*	X				
Arthropoda	Malacostraca	Purple Shore Crab	*Hemigraspus nudus*			X		
Arthropoda	Malacostraca	Pygmy Rock Crab	*Glebocarcinus oregonensis*	X				
Arthropoda	Malacostraca	Red Rock Crab	*Cancer productus*	X	X			X
Arthropoda	Malacostraca	Rock Crab	*Cancridae*					X
Arthropoda	Malacostraca	Shrimp	*Pandalus* sp.	X				
Arthropoda	Theocostraca	Acorn Common and/or Northern Acorn Barnacles	*Balanus glandula* and/or *Semibalanus balanoides*		X	X		
Arthropoda	Theocostraca	Barnacle	*Cirripedia*		X	X		
Arthropoda	Theocostraca	Crenate Barnacle	*Balanus crenatus*	X	X			
Arthropoda	Theocostraca	Little Brown Barnacle	*Chthamalus dalli*		X	X		
Chordata	Teleostei	Great Sculpin	*Myoxocephalus polyacanthocephalus*		X		X	
Chordata	Teleostei	Greenling	*Hexagrammidae*		X			X
Chordata	Teleostei	Righteye Flounder	*Pleuronectidae*		X			X
Chordata	Teleostei	Rockfish	*Sebastes* sp.		X			X
Chordata	Teleostei	Sculpin	*Cottidae*		X			X
Chordata	Teleostei	Shiner Perch	*Cymatogaster aggregata*		X		X	X

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV
Chordata	Teleostei	Staghorn Sculpin	*Leptocottus armatus*		X			X
Chordata	Teleostei	Surfperch	*Embiotocidae*		X			X
Chordata	Teleostei	Tidepool Sculpin	*Oligocottus maculosus*		X		X	
Chordata	Teleostei	Whitespotted Greenling	*Hexagrammos stelleri*					X
Cnidaria	Anthozoa	Plumose Anemone	*Metridium* sp.					X
Cnidaria	Hydrozoa	Hydrozoan		X	X			
Cnidaria	Hydrozoa	Other Hydroid		X	X			
Echinodermata	Asteroidea	Mottled Star	*Evasterias troschelii*	X	X			
Echinodermata	Asteroidea	Sea star	*Asteriidae*		X			X
Mollusca	Bivalvia	Butter Clam	*Saxidomus gigantea*		X	X		
Mollusca	Bivalvia	Horse Clam	*Tresus* sp.	X				
Mollusca	Bivalvia	Mussel	*Mytilus* sp.		X	X		
Mollusca	Bivalvia	Pacific Littleneck Clam	*Leukoma staminea*		X	X		
Mollusca	Gastropoda	Bittium Snail	*Bittium* sp.			X		
Mollusca	Gastropoda	Checkered Periwinkle	*Littorina scutulata*		X	X		
Mollusca	Gastropoda	Frilled Dogwinkle	*Nucella lamellosa*			X		
Mollusca	Gastropoda	Limpet	*Patellogastropoda*		X	X		
Mollusca	Gastropoda	Mask Limpet	*Lottia persona*			X		
Mollusca	Gastropoda	Plate Limpet	*Lottia scutum*		X	X		
Mollusca	Gastropoda	Rough Keyhole Limpet	*Diodora aspera*	X				
Mollusca	Gastropoda	Shield Limpet	*Lottia pelta*			X		
Mollusca	Gastropoda	Sitka Periwinkle	*Littorina siktana*		X	X		
Mollusca	Polyplacophora	Chiton	*Tonicella* sp.	X				
Mollusca	Polyplacophora	Chiton interstinctus	*Lepidozona interstincta*			X		
Mollusca	Polyplacophora	Hairy Chiton	*Mopalia* sp. *(*possibly *kennerleyi)*	X				
Porifera	Demospongiae	Breadcrumb Sponge	*Halichondria panicea*		X	X		
Porifera	Demospongiae	Other Sponge Flat		X	X			
Porifera	Demospongiae	Sponge Flat		X	X			

North Porcher
Sampling date: May 17th& 28th, 2024

Surveys conducted: dive, intertidal, eDNA water samples, BRUV, drone, beach seine, wildlife camera, eDNA sand sample, shoreline debris.

The North Porcher site has cobble and boulders with small pockets of sand at mid-low intertidal areas and a steeper upper shore with larger boulders (Figure 36, Figure 37). The site is exposed as shown by the large drift wood pieces above the high tide line. Fauna detected by the surveys at North Porcher are documented in Table 27. A total of 23 fish, two bird, 55 invertebrate, and one tunicate taxa were detected across all methods. eDNA results were only included for taxa detected by at least one other method. The full suite of fish and invertebrate taxa detected using eDNA is found in Appendix 3 and 4.

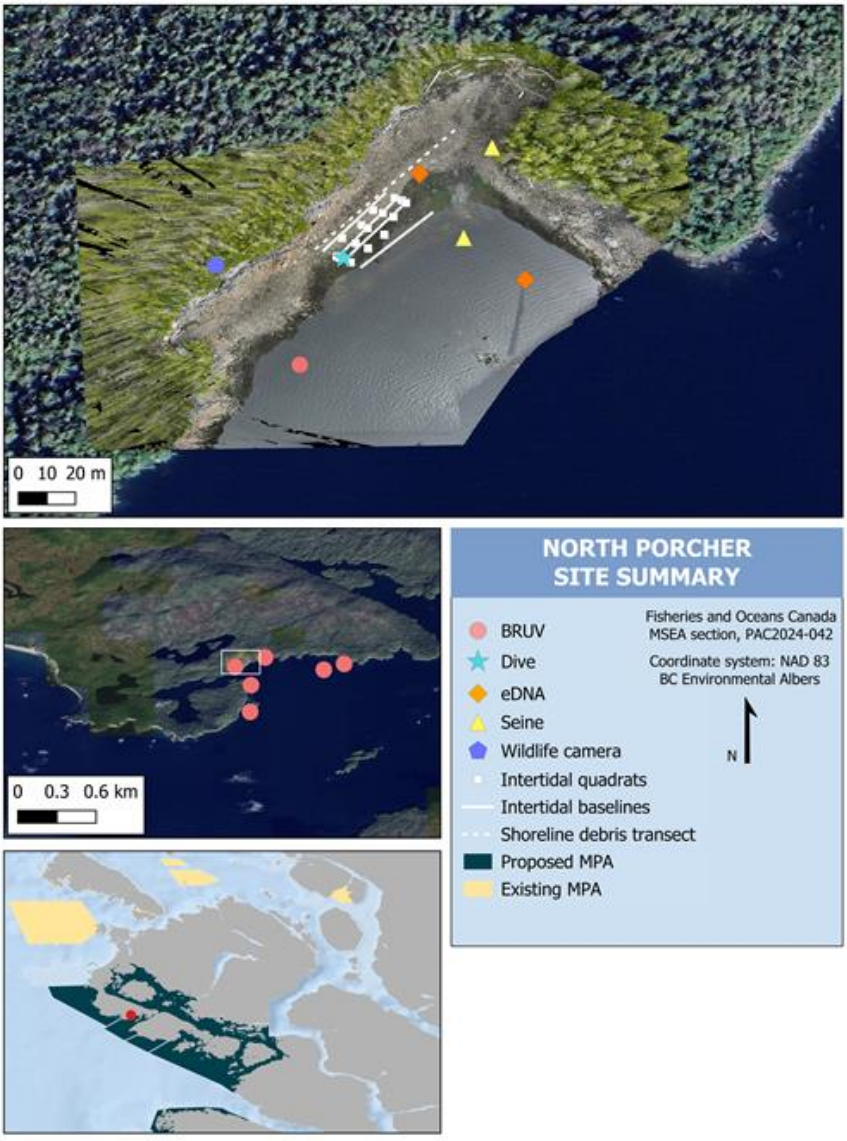


Figure 36. Map of surveys that occurred at North Porcher including drone imagery of the site. The eDNA point on the intertidal area shows the location of the eDNA sand sample, while the eDNA point over the water show the approximate location of the three eDNA water samples taken at this site.



Figure 37. Photo of North Porcher survey area.

Table 27. Faunal taxa detected at the North Porcher site using each survey method. Taxa detected using eDNA are only shown in the table if they were also detected by at least one other method. The full suite of fish and invertebrate taxa detected by eDNA sampling can be found in Appendix 3 and 4.

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV	Wildlife Camera
Annelida	Polychaeta	Cellophane Tube Worm	*Spiochaetopterus costarum*	X					
Annelida	Polychaeta	Dwarf Calcareous Tubeworms	*Pileolaria* sp.	X					
Annelida	Polychaeta	Feather Duster Worm	*Eudistylia vancouveri*	X					
Annelida	Polychaeta	Feather Duster Worm	*Sabellidae*		X			X	
Annelida	Polychaeta	Red Calcareous Tubeworm	*Serpula columbiana*	X					
Annelida	Polychaeta	Sand Tube Worm	*Phragmatopoma californica*	X					
Annelida	Polychaeta	Slime Feather Duster Worm	*Myxicola infundibulum*	X					
Arthropoda	Malacostraca	Crangon Shrimp	*Crangon crangon*				X		
Arthropoda	Malacostraca	Dungeness or Graceful Crab	*Metacarcinus* sp.				X		
Arthropoda	Malacostraca	Green Shore Crab	*Hemigrapsus oregonensis*		X		X		
Arthropoda	Malacostraca	Helmet Crab	*Telmessus cheiragonus*	X	X			X	
Arthropoda	Malacostraca	Hermit Crab	*Paguroidea*	X	X				
Arthropoda	Malacostraca	Kelp Crab	*Pugettia* sp.		X	X			
Arthropoda	Theocostraca	Acorn Common and/or Northern Acorn Barnacles	*Balanus glandula* and/or *Semibalanus balanoides*		X	X			
Arthropoda	Theocostraca	Barnacle	*Cirripedia*		X	X			
Arthropoda	Theocostraca	Little Brown Barnacle	*Chthamalus dalli*		X	X			
Brachiopoda	Rhynchonellata	Common Lampshell	*Terebratalia transversa*	X					
Chordata	Ascidiacea	Broadbase Tunicate	*Cnemidocarpa finmarkiensis*	X					
Chordata	Aves	Corvid	*Corvus* sp.						X
Chordata	Aves	Great Blue Heron	*Aredea herodias*						X
Chordata	Holocephali	Spotted Ratfish	*Hydrolagus colliei*		X			X	
Chordata	Teleostei	Bay Pipefish	*Syngnathus leptorhynchus*				X		
Chordata	Teleostei	Blackeye Goby	*Rhinogobiops nicholsii*		X			X	
Chordata	Teleostei	Buffalo Sculpin	*Enophrys bison*		X		X		

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV	Wildlife Camera
Chordata	Teleostei	Cabezon	*Scorpaenichthys marmoratus*		X			X	
Chordata	Teleostei	Copper Rockfish	*Sebastes caurinus*					X	
Chordata	Teleostei	Crescent Gunnel	*Pholis laeta*		X		X		
Chordata	Teleostei	Fluffy Sculpin	*Oligocottus snyderi*				X		
Chordata	Teleostei	Great Sculpin	*Myoxocephalus polyacanthocephalus*		X			X	
Chordata	Teleostei	Kelp Greenling	*Hexagrammos decagrammus*		X			x	
Chordata	Teleostei	Padded Sculpin	*Artedius fenestralis*		X		X		
Chordata	Teleostei	Painted Greenling	*Oxylebius pictus*					X	
Chordata	Teleostei	Pholidae (juvenile)	*Pholidae* sp.		X		X		
Chordata	Teleostei	Righteye Flounder	*Pleuronectidae*		X			X	
Chordata	Teleostei	Rock Sole	*Lepidopsetta bilineata*		X			X	
Chordata	Teleostei	Shiner Perch	*Cymatogaster aggregata*		X			X	
Chordata	Teleostei	Silver Spotted Sculpin	*Blepsias cirrhosus*		X		X		
Chordata	Teleostei	Snake Prickleback	*Lumpenus sagitta*				X		
Chordata	Teleostei	Starry Flounder	*Platichthys stellatus*		X		X		
Chordata	Teleostei	Surfperch	*Embiotocidae*		X			X	
Chordata	Teleostei	Tidepool Sculpin	*Oligocottus maculosus*		X		X		
Chordata	Teleostei	White Spotted Greenling	*Hexagrammos stelleri*		X		X	X	
Chordata	Teleostei	Wolf Eel	*Arrhichthys ocellatus*		X			X	
Cnidaria	Anthozoa	Orange Sea Pen	*Ptilosarcus gurneyi*					X	
Cnidaria	Hexacorallia	Orange Cup Coral	*Balanophyllia elegans*	X					
Cnidaria	Hexacorallia	Pink-tipped Green Anemone	*Anthopleura elegantisima*			X			
Cnidaria	Hexacorallia	Tiny White Anemone	*Actiniaria*			X			
Cnidaria	Hexacorallia	Tube Dwelling Anemone	*Pachycerianthus fimbriatus*	X				X	
Cnidaria	Hydrozoa	Hydrozoan		X	X				

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV	Wildlife Camera
Cnidaria	Hydrozoa	Other Hydroid		X	X				
Echinodermata	Asteroidea	Mottled Star	*Evasterias troschelii*	X	X				
Echinodermata	Echinoidea	Green Sea Urchin	*Strongylocentrotus droebachiensis*		X			X	
Echinodermata	Echinoidea	Purple Sea Urchin	*Strongylocentrotus purpuratus*					X	
Echinodermata	Echinoidea	Red Sea Urchin	*Mesocentrotus franciscanus*	X	X			X	
Echinodermata	Echinoidea	Sea urchin	*Strongylocentrotus* sp.		X			X	
Echinodermata	Holothuroidea	California Sea Cucumber	*Apostichopus californicus*	X	X			X	
Echinodermata	Holothuroidea	Orange Sea Cucumber	*Cucumaria miniata*	X	X			X	
Echinodermata	Holothuroidea	White Sea Cucumber	*Eupentacta sp.*	X					
Mollusca	Bivalvia	Butter Clam	*Saxidomus gigantea*		X	X			
Mollusca	Bivalvia	Cockle	*Clinocardium nuttalli*		X	X			
Mollusca	Bivalvia	Geoduck	*Panopea generosa*	X	X				
Mollusca	Bivalvia	Mussel	*Mytilus* sp.		X	X			
Mollusca	Bivalvia	Pointed Macoma	*Macoma inquinata*			X			
Mollusca	Gastropoda	Bittium Snail	*Bittium* sp.			X			
Mollusca	Gastropoda	Blue Topsnail	*Calliostoma ligatum*	X					
Mollusca	Gastropoda	Cockerell's Dorid	*Limacia cockerelli*	X					
Mollusca	Gastropoda	Emarginate Dogwinkle	*Nucella emarginata*	X					
Mollusca	Gastropoda	Frilled Dogwinkle	*Nucella lamellosa*	X	X				
Mollusca	Gastropoda	Leafy Hornmouth	*Ceratostoma foliatum*	X					
Mollusca	Gastropoda	Limpet	*Patellogastropoda*		X	X			
Mollusca	Gastropoda	Lirabuccinum Whelk	*Lirabuccinum* sp.			X			
Mollusca	Gastropoda	Moon Snail egg case	*Euspira* sp.	X					
Mollusca	Gastropoda	Horned Nudibranch (Opalescent Nudibranch)	*Hermissenda crassicornis*	X	X				
Mollusca	Gastropoda	Plate Limpet	*Lottia scutum*	X	X	X			
Mollusca	Gastropoda	Rough Keyhole Limpet	*Diodora aspera*	X					

Phylum	Class	Common name	Taxon	Dive	eDNA	Intertidal	Beach Seine	BRUV	Wildlife Camera
Mollusca	Gastropoda	Shield Limpet	*Lottia pelta*		X	X			
Mollusca	Gastropoda	Sitka Periwinkle	*Littorina siktana*		X	X			
Mollusca	Gastropoda	Topsnail	*Trochida* sp.		X	X			
Mollusca	Gastropoda	Whitecap Limpet	*Acmaea mitra*	X					
Mollusca	Gastropoda	Wrinkled Dove Snail	*Amphissa columbiana*	X					
Mollusca	Polyplacophora	Chiton	*Tonicella* sp.	X	X				

Ship-based Sampling

Survey Types and Objectives

Survey types objectives that occurred outside the coastal biodiversity sites are outlined in Table 27.

Table 28. Survey objectives by survey type, for surveys that occurred outside the coastal biodiversity sites. BRUV surveys occurred inside and outside coastal biodiversity sites and are listed with the nearshore biodiversity survey methods above.

Survey Type	Objective(s)
eDNA Water Collection	• Conduct a rapid biodiversity assessment of the Caamaño Sound – Douglas Channel CT area using eDNA metabarcoding • Collect baseline biodiversity information using eDNA metabarcoding from seawater from throughout the MCT area
Microplastics sampling	• Opportunistically filter surface sea water for microplastic quantity and type during transits through and to/from the survey area

Ship-based Water Collection for eDNA Metabarcoding

Water collection for eDNA metabarcoding is a non-invasive tool for monitoring biodiversity in existing and proposed MPAs, providing species presence and absence and measures of relative abundance. Target taxa include fishes and invertebrates using three mitochondrial markers, with incidental detections possible for marine mammals and terrestrial species from freshwater outputs and intertidal zones.

Methods

Water collection sites were identified using a Balanced Acceptance Sampling (BAS) approach (van Dam-Bates et al. 2018). Depth and proximity to shoreline determine the method followed to collect water. For deeper sites (> 50 m bottom depth), water collection was performed from the CCGS *Vector* using a SBE 55 ECO rosette following protocols used in earlier Coastal Biodiversity Surveys. For shallower sites that could not be accessed by the CCGS Vector, water collection was performed from a dive skiff using a Niskin line. The methods followed for each type of water collection are described below.

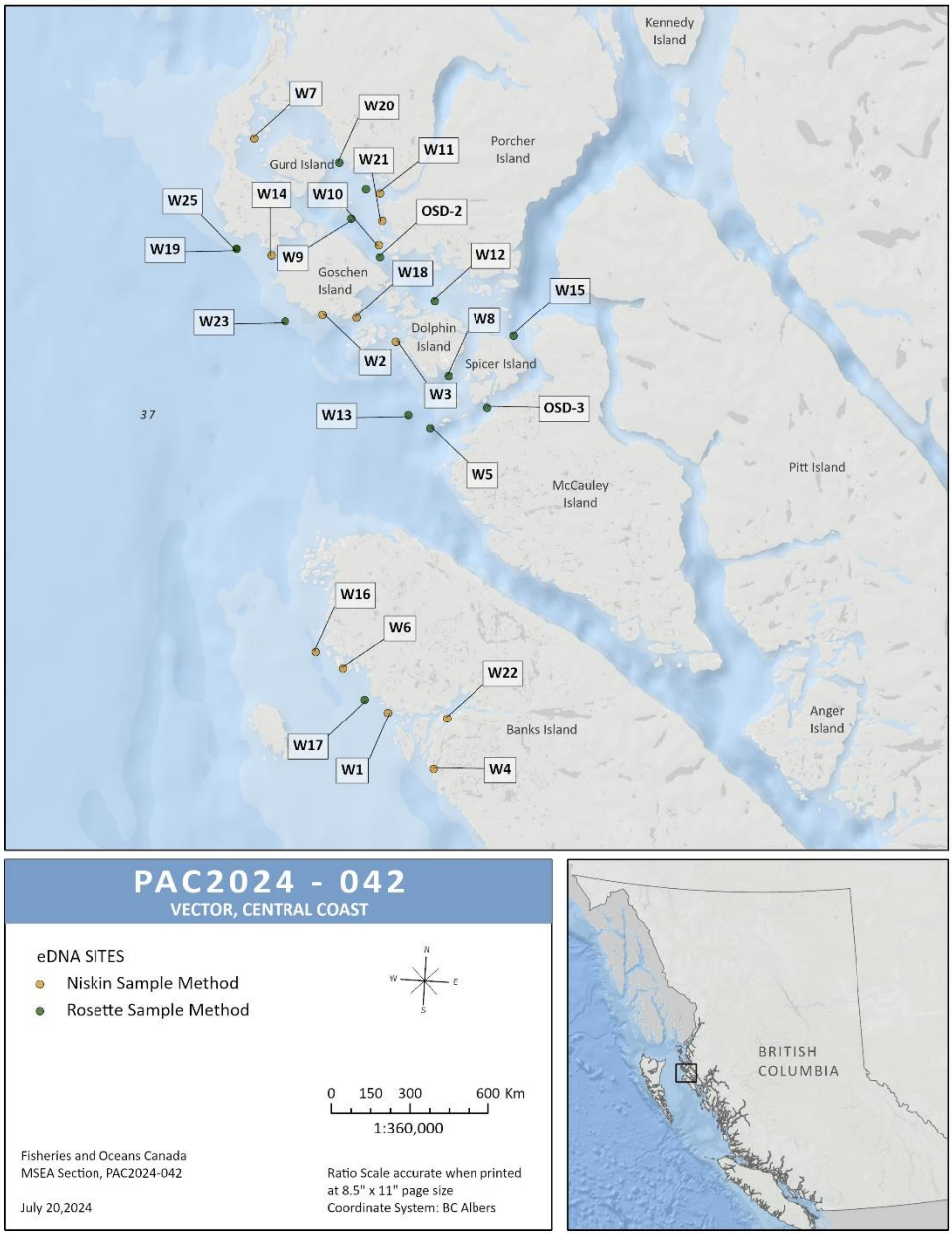


Figure 38. Locations of eDNA surveys sites completed in the Kitkatla MCT area on Leg 1 of PAC2024-042. Samples collected using a Niskin line deployed from the dive boat (Palmira) are shown in orange and samples collected using the mini-rosette deployed from the CCGS Vector are shown in green.

Sites sampled using SBE 55 ECO Water Sampler (mini-rosette)

At deeper sites (>50 m bottom depth), a SBE 55 ECO water sampler (Sea-Bird Scientific, Bellevue, WA), also referred to as a mini-rosette (Figure 39). The mini-rosette consists of a metal frame with six 4 L Niskin bottles, an electronic control module, and a SBE 19p CTD. The SBE 19p included a SBE43 dissolved oxygen sensor and ECO FLRT Fluorometer (Wetlabs). The mini-rosette can be programmed to trigger the Niskin bottles at a given depth or after an elapsed period of time.

For this survey, the mini-rosette was deployed off the starboard of the CCGS Vector using the work winch (Figure 39). During deployment, the mini-rosette was lowered to 10 m depth for 1 minute to allow the

CTD pump to flush, then was brought back to the surface then paid out at 0.5 – 1.0 m/s until it reached the target bottom depth, where it was held for 4 minutes. The ship's sounder (EK80, Kongsberg) was used to determine bottom depth. This 4 minute "holding" window instructed the mini-rosette to trigger the bottom bottle. Three bottles were triggered at 5 m from bottom. The mini-rosette was then retrieved at 1.0 m/s, and the remaining three bottles were automatically triggered when the unit was 2 m from the surface, so that each station had three replicates of both bottom and surface samples.

After retrieval, the mini-rosette was placed on a dolly and wheeled to the lab on the *Vector* and connected to a laptop for the data to be checked and downloaded. The bottles were checked for seal integrity by opening the air bleed valve while the spigot was closed. Water filtration was subsequently performed in the lab on the *Vector*, as described below (Figure 40) and the mini-rosette was reprogrammed for the next cast.



Figure 39. SBE 55 ECO mini-rosette water sampler on the deck (left) and during deployment from the starboard of the CCGS Vector.



Figure 40. DFO staff setting up to filter water samples collected using the rosette on board the CCGS Vector.

Sites sampled using Niskin line

Shallow stations (< 50 m bottom depth) were sampled from a small boat (*Palmira*) using individual 1.7 L Niskin bottles (General Oceanics, Miami, FL) that were manually triggered with bronze messengers (Go Devil 31oz, General Oceanics). The setup involved a ¼" AmSteel-Blue line (Samson Rope, Ferndale, WA) strung through a crab pot hauler with two 5 lb cannonballs and a CastAway-CTD (Sontek, San Diego, CA) secured with 1 m of line to the end thimble (Figure 41). Flagging tape threaded through the line marked 5 m increments. A Niskin was attached to the line just above the thimble splice (~1.25 m above the bottom cannonball), and lowered to two meters below the surface of the water.

Once the messengers were deployed and the water collected, the Niskins were removed from the line and hung on the back of the *Palmira*. Water was filtered directly from the Niskins on board the Palmira in the same manner as from the mini-rosette (described below). A field blank (i.e., a 1 L bottle of distilled water that was exposed to the air for a few minutes) was also filtered each sampling day.

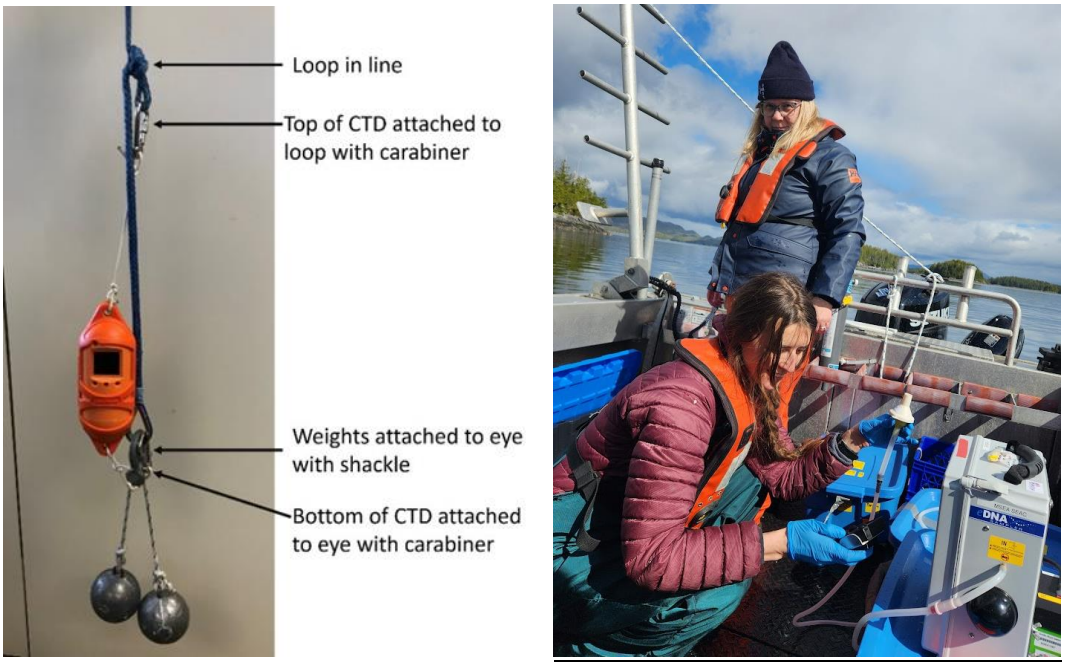


Figure 41. Set-up for water collection using single Niskin deployment with the CastAway CTD and attached weights (left) and DFO staff performing water filtration aboard the Palmira (right).

Water filtration

To filter the water collected using the mini-rosette or Niskin line, the Niskin bottles were connected directly to the Smith-Root Sampler (Figure 42). As noted above, self-preserving filters were used, which eliminates the need for freezing, storage and preservation and greatly reduces the potential for contamination. As the water was being filtered, the unique sample ID (MCT number), filter start time, filter end time, volume (L) filtered, the Smith-Root ID (unique number recorded by the sampler), the Smith Root Unit Name, and any relevant notes were recorded. Samples were delivered back to DFO's Pacific Biological Station. Detailed DNA extraction and metabarcoding methods are described in Proudfoot et al. (2025a).



Figure 42. Smith-Root Samplers in CCGS Vector laboratory.

Results

12 sites were sampled using the mini-rosette from the *Vector* and 13 sites were sampled using the Niskin line from the dive skiff (*Palmira*). A total of 126 litres of water was sampled and filtered (including field blanks but excluding the shore-based water collection described above). The ship-based eDNA biodiversity baseline samples detected 195 fish species from 49 families, as well as 605 invertebrate taxa from 16 phyla. Fish and invertebrate species richness detected at each sampling location is shown in Figure 43 and Figure 44. Refer to Appendix 6 for full species by site matrices for fish and invertebrates. Note that locations of Northern Abalone (*Haliotis kamtschatkana*) are not published in compliance with the Northern Abalone Action Plan (DFO 2012). In addition, five mammal species (Steller Sea Lion (*Eumetopias jubatus*), Pacific White-sided Dolphin (*Aethalodelphis obliquidens*), Harbour Porpoise (*Phocoena Phocoena*), Dall's Porpoise (*Phocoenoides dalli*), and Harbour Seal (*Phoca vitulina*)) and 210 plant/algae species were detected. Data for mammal and plant/algae species are available upon request.

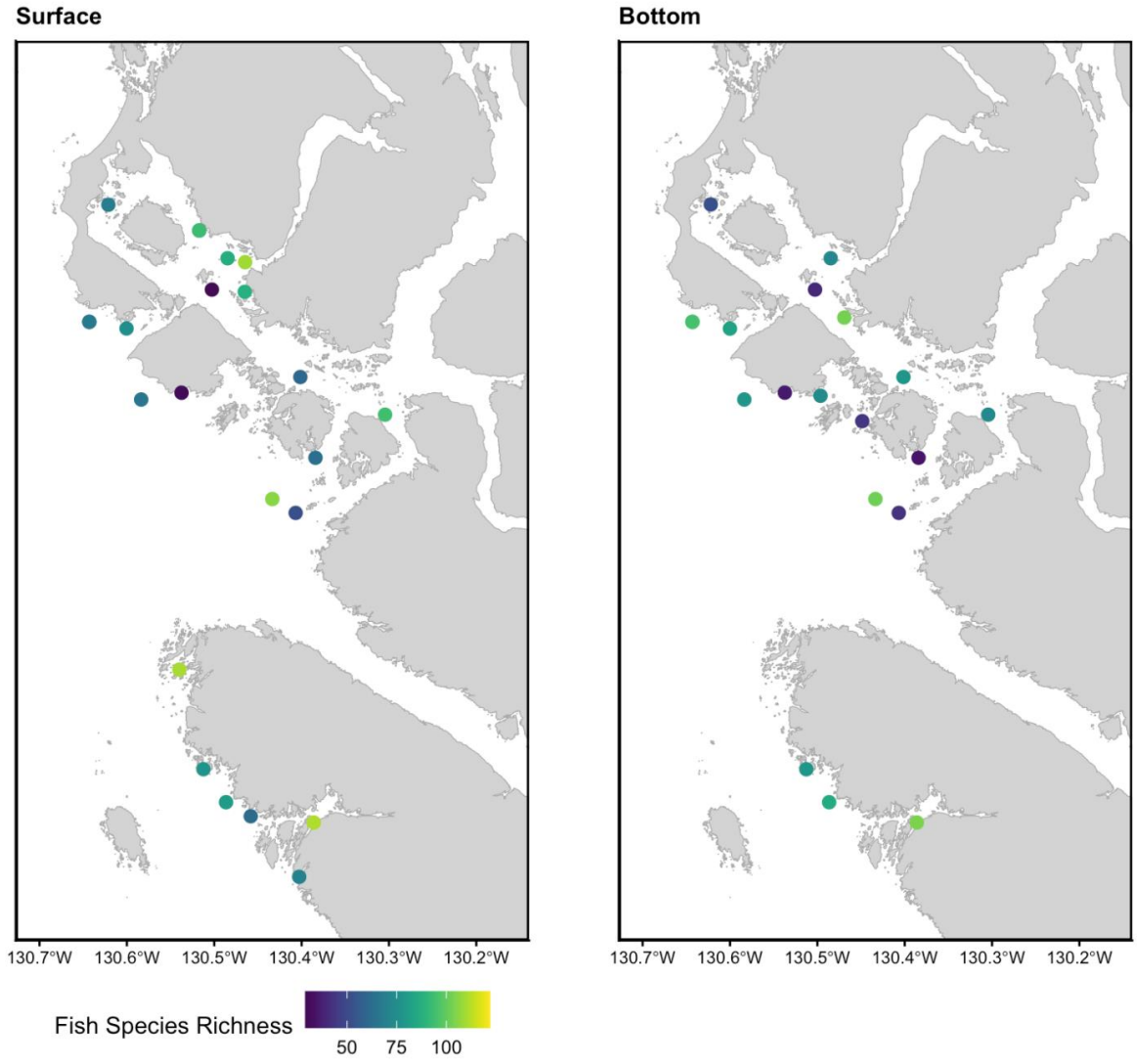


Figure 43. Fish species richness from ship-based eDNA sampling within the Kitkatla Inlet Network Zones from the PAC2024-042 survey.

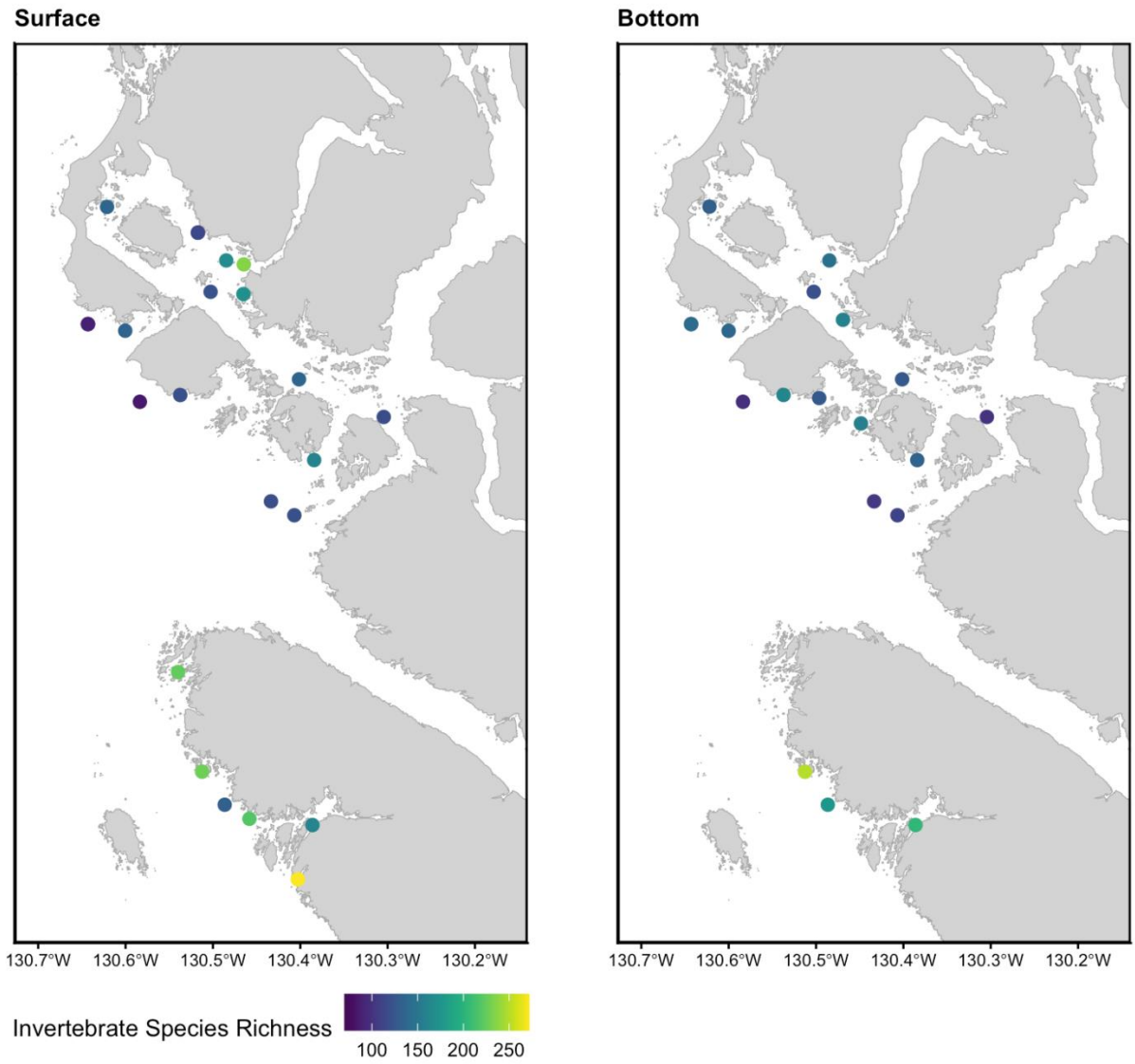


Figure 44. Invertebrate species richness from ship-based eDNA sampling within the Kitkatla Inlet Network Zones from the PAC2024-042 survey.

Table 29. Summary of eDNA water collection. Coordinates are in decimal degrees (DD) and are the mean values of the 3 or 6 Niskin bottles collected. Only one depth was sampled using the Niskin line from the dive skiff but a bottom and surface depth were sampled using the rosette from the CCGS Vector.

Station	Date	Longitude (DD)	Latitude (DD)	Method	Number of Bottles	Depth Sampled (m)		Notes
W_1	May 19	-130.467	53.504	Niskin	3	2	NA	
W_2	May 18	-130.578	53.789	Niskin	6	15	2	
W_3	May 18	-130.486	53.773	Niskin	3	8	NA	
W_4Alternate	May 19	-130.407	53.465	Niskin	3	2	NA	Niskin leaked, smaller volume filtered as a result. Original W_4 site too shallow so sampled in deeper water.
W_5	May 20	-130.438	53.712	SBE 55 ECO Rosette	6	41.8	2.9	
W_6	May 19	-130.525	53.534	Niskin	6	10	2	
W_7	May 17	-130.677	53.914	Niskin	6	20	2	CTD attached to Niskin on first cast. Blank for the day done on the Vector because we did the morning on the Vector (using the Rosette) and then the Niskin line in the afternoon Boat drifted, and ended up sampling a little shallower.
W_8	May 20	-130.419	53.751	SBE 55 ECO Rosette	6	104.7	2.9	
W_9_recast	May 20	-130.551	53.860	SBE 55 ECO Rosette	6	37.8	2.9	Recast, samples from W_9 not used.
W_10	May 17	-130.515	53.843	Niskin	3	18	NA	
W_11	May 17	-130.517	53.880	Niskin	3	2	NA	
W_12	May 20	-130.442	53.805	SBE 55 ECO Rosette	6	64.2	2.8	
W_13	May 18	-130.465	53.721	SBE 55 ECO Rosette	6	81.3	2.7	
W_14	May 18	-130.646	53.830	Niskin	6	15	2	
W_15	May 20	-130.341	53.783	SBE 55 ECO Rosette	6	2.9	116.6	
W_16	May 19	-130.560	53.545	Niskin	3	1.5	NA	

W_17	May 19	-130.497	53.513	SBE 55 ECO Rosette	6	17.0	2.8	
W_18	May 18	-130.536	53.789	Niskin	3	10	NA	
W_19	May 18	-130.690	53.833	SBE 55 ECO Rosette	6	34.6	2.9	
W_20	May 17	-130.5697	53.9001	SBE 55 ECO Rosette	6	36.0	2.8	Bottle 2 (bottom sample) didn't trigger.
W_21	May 17	-130.513	53.860	Niskin	3	2	NA	Should have done 3 on the bottom but did 3 on the surface by mistake (site shallower than 15 m.
W_22	May 19	-130.394	53.503	Niskin	6	10	2	Pump issues (in and out tubing backwards). Filtering cast 16 and initial cast 17 unsuccessful.
W_23	May 18	-130.624	53.783	SBE 55 ECO Rosette	6	10.0	0.9	No water in bottle 6.
W_24	May 17	-130.535	53.882	SBE 55 ECO Rosette	6	21.9	2.6	Bottle 1 (bottom sample) didn't trigger.
W_25	May 18	-130.690	53.833	SBE 55 ECO Rosette	6	17.5	2.8	

Ship-based Water Sampling for Microplastics

We used ship transit time to opportunistically filter surface seawater (~1.8 m below surface) throughout the coast to learn about spatial and temporal patterns in microplastic density, morphology, and polymer type.

Methods

Detailed steps are outlined in the microplastics sampling protocol tech report.[5]

Seawater was collected from approximately ~1.8 m below the sea surface at the forward end of the *CCGS Vector* and moved via the ship's seawater system of predominately welded stainless steel piping (but see Table 30), and directed to a filtration unit located in the ship's laboratory. Within the filtration unit, seawater was passed through a stainless steel filter with a pore size of 45 µm, housed in a sealed filter casing; a photo of the filtration unit is provided in Figure 35.

For transits where sampling was required, a new filter was installed, and both the volume of water filtered and the GPS track were recorded. The target volume per filter for this cruise was 200 L; however, filters were replaced earlier if clogging occurred.

Filter exchanges were conducted within a laminar flow hood to minimize contamination (Figure 37); an air blank was collected simultaneously to measure possible contamination during this step. Filter housings were rinsed between filters using filtered freshwater that had passed through Milli-Q Q-Gard 2 Purification Cartridge to remove ionic and organic contaminants to trace levels, and Quantum EX Polishing Cartridge to remove organics and ions to trace levels.

Filters containing samples (aka filter samples) were transferred to plastic petri dishes, stored at -20 °C, and shipped to Ocean Diagnostics Inc. (ODI) Lab for identification of microplastic polymer type, particle size, and morphology.

Methods are under development for controlling and measuring contamination throughout all phases of sampling; potential sources of contamination are summarized in Table 30.

[5] Dudas et al. In prep. Methods for using CCGS Vector as a platform to sample microplastics in sub-surface water throughout coastal Pacific Canada. Can. Tech. Rep. Fish. Aquat. Sci.



Figure 45. Photo of the filtration unit designed by Ocean Diagnostic Inc. (ODI) set up in the ship's laboratory. Water travels through two blue filter housings, each containing a filter, then through the flowmeter, which measures the volume filtered.



Figure 46. Photos of the laminar flow hood where samples were processed, showing the outside (left) and the inside contents (right).

Table 30. Possible sources of contamination and protocols in place for their control and measurement (an absence of protocols in indicated by '-').

Possible source of contamination	Control	Measurement
CCGS *Vector* seawater collection system: Welded stainless steel piping, EPDM (ethylene propylene diene monomer) rubber stator, flexible polymer tubing, likely valves containing EPDM or polytetrafluoroethylene (PTFE) and pipe alterations with plumbers tape and pipe dope containing PTFE	-	Procedural blank under development
Underway Sampling Instrument: Polypropylene (PP) filter housings	Personnel ensured filter housing threads were aligned when closing.	ODI ran contamination trials on these filter housings (for ascension) and found very low rates (also identifiable by colour). Procedural blank under development
Filters	ODI visually inspected filters to confirm absence of microplastic particles before use, then stored in an airtight metal container.	Procedural blank under development
Sample processing environment in ship lab	Samples were processed in the laminar flow hood (designed to reduce airborne contaminants by providing uniform HEPA-filtered air flow across the work area), though the hood is made of plastic. Personnel wore cotton lab coats, washed hands before processing, and minimized plastic textiles.	A glass fibre filter air blank was placed inside the laminar flow hood during each round of filter processing and visually analyzed by ODI; this air blank protocol may be modified in the future in order for ODI analyses to detect smaller particles. Procedural blank under development
Rinsing filter housings with Milli-Q water stored in plastic containers (blue PP carboy, white PP and/or PE squeeze bottle)	Method for rinsing with seawater under development	Procedural blank under development
Sample storage in petri containers made of polystyrene (PS)	Some of the filters used on this survey were machine cut to reduce abrasion in petri containers. Plastic-free storage under development	ODI ran contamination trials on filters stored in petri containers (Flores Ruiz et al. 2025a) Procedural blank under development

Results

A total of 44 sample filters were collected along transits between Kitkatla and Departure Bay (Table 31, Figure 47). A total of 3265 L of seawater were filtered, averaging 74 L per sample filter. Filter clogging was an issue, with as little as 8 L of water being filtered before clogging a filter.

A subset of sample filters were sent to ODI lab for analysis of microplastic density, polymer, and morphology. The subset of filters was selected to maximize spatial coverage within financial constraints, and included fourteen filters combined into six groups to achieve the target volume of 200 L per sample. The other filters are stored in a freezer for potential future analyses.

Results from the lab analysis of the six groups of sample filters are reported in the laboratory report (Yang and Flores 2025) and addressed in subsequent reports on polystyrene contamination and interpretation of lab results: Yang 2025; Flores Ruiz et al. 2025a, 2025b. A list of polymers and morphologies detected across all samples in Yang and Flores 2025 is included in Figure 47.

Table 31. Microplastic samples collected on the cruise.

Date	Region	Sample #	L filtered
May 17, 2024	SE of Ness Island Kitkatla Inlet 1/2	PAC2024-042-001A-ST	16.8
May 17, 2024	SE of Ness Island Kitkatla Inlet 2/2	PAC2024-042-001B-ST	18.3
May 18, 2024	W of Goschen Island 1/2	PAC2024-042-002A-UW	18.2
May 18, 2024	W of Goschen Island 2/2	PAC2024-042-002B-UW	17.9
May 18, 2024	W of Goschen Island Blank	PAC2024-042-003-BL	air blank
May 18, 2024	W of Porcher Peninsula 1/2	PAC2024-042-004A-UW	22
May 18, 2024	W of Porcher Peninsula 2/2	PAC2024-042-004B-UW	55.52
May 18, 2024	North of Banks Island	PAC2024-042-005-UW	243
May 18, 2024	North of Banks Island	PAC2024-042-006-BL	air blank
May 19, 2024	Griffith Harbour to Kingkown Inlet	PAC2024-042-007-UW	28.94
May 19, 2024	Kingkown Inlet to Griffith Harbour	PAC2024-042-008-UW	22.8
May 19, 2024	Griffith Harbour to NE Banks Anchorage	PAC2024-042-009-UW	20.51
May 20, 2024	Kitkatla Channel	PAC2024-042-010-UW	Unkn
May 20, 2024	Kitkatla Channel	PAC2024-042-011-UW	Unkn
May 28, 2024	Ogden Channel	PAC2024-042-012-UW	8.29
May 28, 2024	Entrance to Grenville Channel	PAC2024-042-013-UW	7.51
May 28, 2024	Grenville Channel	PAC2024-042-014-UW	9.48
May 28, 2024	Grenville Channel	PAC2024-042-015-UW	11.61
May 28, 2024	Grenville Channel	PAC2024-042-016-UW	13.18
May 29, 2024	Tolmie Channel / Sarah Passage	PAC2024-042-017-UW	24.72
May 29, 2024	Finlayson Channel	PAC2024-042-018-UW	14

Date	Region	Sample #	L filtered
May 29, 2024	Milbanke Sound	PAC2024-042-019-UW	171.1
May 29, 2024	Seaforth channel(st) by Law Island at end	PAC2024-042-020-UW	72.01
May 29, 2024	Return Ch entrance(st) - Johnson Ch (end)	PAC2024-042-021-UW	86.95
May 29, 2024	Johnson channel (st) - Fisher Channel (end)	PAC2024-042-022-UW	44.65
May 29, 2024	Fisher Channel(st)-(end)	PAC2024-042-023-UW	73.36
May 29, 2024	Fisher Channel (st) - Fitz Hugh Sound (end)	PAC2024-042-024-UW	44.91
May 29, 2024	Fitz Hugh Sound(st)-Fitz Hugh Sound (end)	PAC2024-042-025-UW	55.66
May 29, 2024	Fitz Hugh Snd (st)-Q Charlotte Snd (end)	PAC2024-042-026-UW	80.01
May 29, 2024	Q Charlotte Snd (st)-Q Charlotte Snd (end)	PAC2024-042-027-UW	83.79
May 29, 2024	Q Charlotte Sound (st) – Q Charlotte	PAC2024-042-028-UW	20.01
May 29, 2024	Q Charlotte Strait(st) – Q Charlotte Strait	PAC2024-042-029-UW	23.59
May 29, 2024	blank	PAC2024-042-029-UW	air blank
May 29, 2024	Queen Charlotte strait	PAC2024-042-030-UW	16.77
May 29, 2024	Queen Charlotte strait	PAC2024-042-031-UW	16.27
May 30, 2024	Johnstone Strait	PAC2024-042-032-UW	118.5
May 30, 2024	Johnstone Strait	PAC2024-042-033-UW	150.4
May 30, 2024	Johnstone Strait	PAC2024-042-034-UW	205.5
May 30, 2024	Johnstone Strait	PAC2024-042-035-UW	200.1
May 30, 2024	Johnstone Strait	PAC2024-042-036-UW	185.2
May 30, 2024	Johnstone Strait	PAC2024-042-037-UW	air blank
May 30, 2024	Johnstone Strait	PAC2024-042-038-UW	123.7
May 30, 2024	Johnstone Strait (st) - Discovery Psg (end)	PAC2024-042-039-UW	96.98
May 30, 2024	Discovery Passage and Seymour Narrows	PAC2024-042-040-UW	69.3
May 30, 2024	Discovery Passage	PAC2024-042-041-UW	57.46
May 30, 2024	Kuhushan Pt (st) -	PAC2024-042-042-UW	64.98
May 30, 2024	Cape Lazo	PAC2024-042-043-UW	56.02
May 31, 2024	Parksville (st) - Ballenas Channel(end)	PAC2024-042-044-UW	200.4
May 31, 2024	Ballenas Channel (st)-Icarus pt(e d)	PAC2024-042-045-UW	213.8
May 31, 2024	Icarus pt(st)-Departure Bay (end)	PAC2024-042-046-UW	180.5

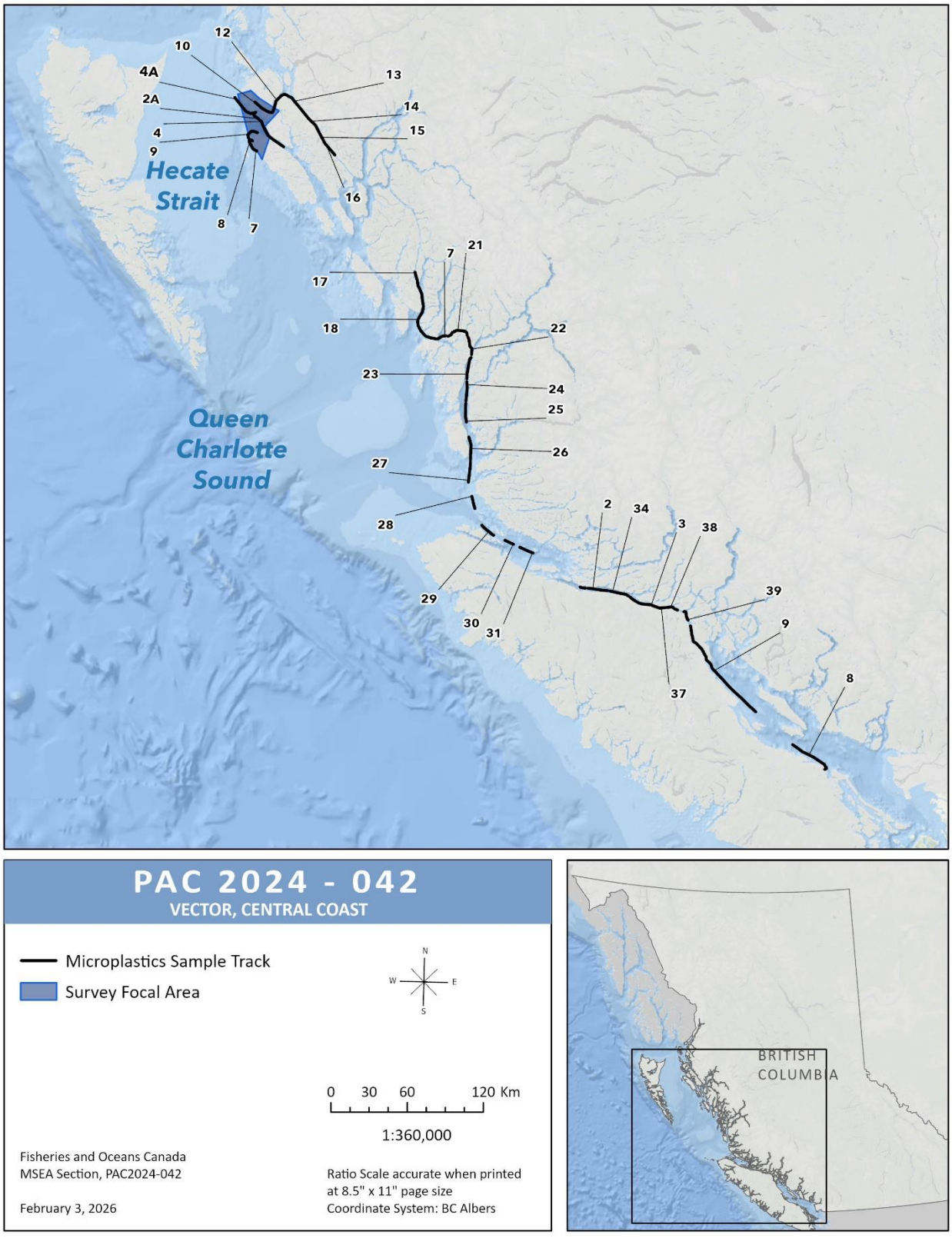


Figure 47. Microplastic sample tracks, labelled by sample number.

Table 32. Polymers and morphologies detected in all samples analyzed reported in Yang and Flores 2025 ('x' indicates the polymer-morphology combination was detected, '-' indicates that it was not detected).

Polymer detected in analyzed samples		Morphology	
		Fibre	Fragment
Polypropylene	PP	x	x
Polyethylene Terephthalate	PET	x	x
Polyacrylonitrile	PAN	x	-
Polyvinyl Chloride	PVC	-	x
Polyurethane	PU	-	x
Polyethylene	PE	-	x
Polystyrene	PS	-	x
Acrylonitrile Butadiene Styrene	ABS	-	x
Polyamide	PA	-	x
Polycarbonate	PC	-	x
Polymethylmethacrylate (Acrylic)	PMMA	-	x
Polyoxymethylene (Acetal)	POM	-	x
Polybutylene Terephthalate	PBT	-	x

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Appendix 1. Intertidal Biodiversity Surveys, Clam Biomass.

Table 1A. Data from lab processing of coastal biodiversity survey clam biomass specimens (n=81), which were dried for one day.

Species	Site	Date	Biomass specimen ID	Quadrat	Length (mm)	Height (mm)	Thickness (mm)	Total wet wt (g)	Wet weight flesh (g)	Wet weight shell (g)	Dry weight flesh (g)	Dry weight shell (g)
Bentnose Macoma	Head of Kitkatla Inlet	May 26, 2024	2024-01	12DO	45	33	17	15.7	7.25	9.55	2.2	9.15
			2024-02	12DO	47	35	16	16.8	6.55	9.95	2.2	9.7
			2024-03	5	23	17	18	1.45	1.75	1.65	1.25	1.6
			2024-04	2	19	15	7	1.1	1.55	1.7	1.2	1.65
			2024-05	11	30	22	6	4.15	2.95	3.2	1.5	3.05
			2024-06	4	34	25	12	6.55	2.7	4.55	1.3	4.35
			2024-07	4	29*	18*	14	9.8	4.5	6.5	1.95	6.3
			2024-08	11	35	27	13	7.35	4.35	5	1.85	4.9
			2024-09	4	42	32	14	11.95	4.35	7.4	1.8	7.15
			2024-10	3	50	36	19	22.1	7.2	13.9	2.2	13.3
			2024-11	12DO	29	21	10	3.1	2.75	2.5	1.45	2.4
			2024-12	11	28*	12*	21	3.55	2.75	2.85	1.45	2.75
Butter Clam	Kitkatla Creek	May 24, 2024	2024-13	not recorded	17.5	14.5	8	1.35	1.55	1.85	1.2	1.8
			2024-14	not recorded	17	15	8.5	1.35	1.45	1.9	1.2	1.85
			2024-15	not recorded	45	35	21.5	20.7	9.2	12.15	2.85	11.5
	Head of Kitkatla Inlet	May 26, 2024	2024-16	not recorded	52.5	44	27	37.25	17.7	20.3	4.1	19.45
			2024-17	not recorded	51	41	24	not recorded	10.5*	28.2*	3.35	15.75
			2024-18	not recorded	44	35	24	not recorded	13.5*	23.55*	2.8	12.7
			2024-19	not recorded	47	37	24	not recorded	14.45*	27.4*	3.05	13.75
			2024-20	not recorded	53	44	29	not recorded	18.8	30.1	4.45	28.3
			2024-21	not recorded	65	52	34	not recorded	31.05	42.95	7	41
			2024-22	not recorded	51	41	26	not recorded	14.45	18.2	3.6	17.1
			2024-23	not recorded	60	50	31	59.85	25.8	31.85	5.55	30.4
			2024-24	not recorded	59	50	32	61.05	23.65	30.9	5.35	29.5
			2024-25	not recorded	40	30	22	18.65		11.95	2.3	11.05

Species	Site	Date	Biomass specimen ID	Quadrat	Length (mm)	Height (mm)	Thickness (mm)	Total wet wt (g)	Wet weight flesh (g)	Wet weight shell (g)	Dry weight flesh (g)	Dry weight shell (g)
			2024-26	not recorded	35	26	16	8.75	5	5.65	1.8	5.3
			2024-27	not recorded	32	25	15	7.6	4.4	5	1.7	4.75
			2024-28	not recorded	24	19	11	3.2	2.05	2.85	1.25	2.7
			2024-29	not recorded	30	29	9	6.05	3.65	4.35	1.5	4.05
			2024-30	not recorded	15	13	7	1	1.4	1.7	1.15	1.6
Cockle	Kitkatla Creek	May 24, 2024	2024-31	not recorded	31	29	21	11.3	4.75	7.55	1.8	6.95
			2024-32	not recorded	31	29.5	21	10.55	4.8	7.5	1.9	7
			2024-33	not recorded	43	40	28	27.6	11.3	15.65	3.2	14.5
			2024-34	not recorded	44.5	41	29	30.05	11.85	17.75	3.2	16.45
			2024-35	not recorded	41	38	27	23.7	9.75	12.6	2.75	11.6
			2024-36	not recorded	38	36	24	17	8.05	9.15	2.3	8.4
			2024-37	not recorded	37	34	25	18.1	7.35	11.15	2.15	10.3
			2024-38	not recorded	28	26.5	19	8.2	3.7	5.8	1.6	5.45
			2024-39	not recorded	20	17	12	2.6	2.15	2.5	1.3	2.35
			2024-40	not recorded	18	13	8	0.8	1.4	1.6	1.2	1.5
			2024-41	not recorded	11.5*	8*	7	0.65	1.3	1.5	1.15	1.45
			2024-42	not recorded	11.5	11	6.5	0.5	1.25	1.4	1.15	1.35
	Head of Kitkatla Inlet	May 26, 2024	2024-43	8	51	45	32	40.1	14.95	20.7	3.8	19.05
			2024-44	3	56	53.5	35	52.55	18.05	27.7	4.45	25.85
			2024-45	11	38	34	23.5	16.2	6.65	8.9	2	8.2
			2024-46	4	36	33	22.5	12.65	4.65	7.5	1.7	6.9
			2024-47	8	29	26	18	7.6	4	5.25	1.6	4.75
			2024-48	5	33	31	22	12.05	5.25	4.75	1.7	6.45
			2024-49	1	31	28	19	8.8	3.4	5.75	1.55	5.35
			2024-50	1	31.5	29	20	9.4	4.25	5.6	1.6	5.1
			2024-51	9	32	31	21	11.35	4.1	6.7	1.65	6.25
Pacific Littleneck		May 26, 2024	2024-52	1	33	27	17	9.3	3.8	6.3	1.55	6
			2024-53	1	26	22	14	5.15	2.6	3.85	1.4	3.7

Species	Site	Date	Biomass specimen ID	Quadrat	Length (mm)	Height (mm)	Thickness (mm)	Total wet wt (g)	Wet weight flesh (g)	Wet weight shell (g)	Dry weight flesh (g)	Dry weight shell (g)
	Head of Kitkatla Inlet		2024-54	11	17	16	10	1.5	1.5	1.95	1.2	1.85
			2024-55	4	36	31	22	15.3	5.25	10.1	1.8	9.6
			2024-56	2	25	21	13	4.85	2.5	3.95	1.35	3.8
			2024-57	11	47	40	30	38.15	15.4	21.7	3.75	20.55
			2024-58	1	37	33	24	22.05	6.25	14.35	2.2	13.6
			2024-59	1	41	36	24	21.6	9.4	12.25	2.45	11.25
			2024-60	12DO	34	31	20	13.55	4.8	9	1.85	8.55
			2024-61	3	31	28	18	9.75	4.6	6.6	1.75	6.3
			2024-62	8	50	42	29	32.15	12.05	19.75	3.45	18.95
			2024-63	2	32	28	19	10.5	4.1	6.85	1.6	6.5
			2024-64	2	53	47	31	48.05	12.25	26.05	3.2	24.45
			2024-65	12DO	45	39	27	31.95	9.5	20.05	2.65	18.9
			2024-66	2	31	28	18	9.6	4.15	6.2	1.6	5.9
Pointed Macoma	Head of Kitkatla Inlet	May 26, 2024	2024-67	11	34	24	13	5.6	3.5	3.45	1.55	3.3
			2024-68	9	38	28	16	9.45	5.5	5.25	1.8	4.95
			2024-69	9	33	25	13.5	5.95	3.7	3.8	1.55	3.6
			2024-70	11	32	23	12	5.1	3.35	3.45	1.5	3.3
			2024-71	2	25	19	10	2.55	2.15	2.25	1.3	2.15
			2024-72	1	24	18	9	2.2	1.75	2.15	1.25	2.1
			2024-73	12DO	38	29	15	8.55	4.95	4.7	1.85	4.45
			2024-74	8	37	27	14	7.85	4.15	4.45	1.75	4.25
			2024-75	11	25	19	9	2.4	1.9	2.15	1.25	2.05
			2024-76	1	25	18	9	2.15	2.2	2	1.3	1.9
			2024-77	1	24	18	9	1.95	1.95	1.95	1.25	1.9
			2024-78	2	21	15	7	1.15	1.75	1.6	1.25	1.55
			2024-79	1	23	18	9	2.05	2.05	2.1	1.3	2
			2024-80	2	17	12	6	0.6	1.45	1.45	1.2	1.4
			2024-81	2	17	12	6	0.65	1.35	1.4	1.2	1.4

*indicates value was swapped from adjacent starred field, where it had been erroneously entered.

Appendix 2. Intertidal Biodiversity Surveys, Sediment Samples.

Table 2A. Lab results (Biologica Environmental Services Ltd.) from intertidal biodiversity survey sediment samples – meiofauna abundance data from the 63 um fraction sampled via elutriate method. Results are summarized by quadrat with corresponding intertidal zone (low=0.8-1.5 m, mid=1.5-2.2 m, and high=2.2-3.0 m above mean low water elevation) and site.

Taxonomic group	Taxon	Abundance (count of individuals)																		
		Kitkatla Creek Site									Head of Kitkatla Inlet Site									Total
		Low Zone			Mid Zone			High Zone			Low Zone			Mid Zone			High Zone			
		Q3	Q15	Q9	Q5	Q14	Q8	Q4	Q7	Q13	Q3	Q15	Q9	Q5	Q11	Q2	Q4	Q7	Q13	
Arthropoda	Amphipoda	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	**3**
	Arachnida (Acari)	1	2	-	1	-	-	-	2	1	-	3	1	1	-	-	1	1	1	**15**
	Cirripedia	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**
	Cumacea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	**1**
	Cyclopoida	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	**1**
	Harpacticoida	11	35	110	65	104	120	279	316	11	81	39	64	98	32	33	148	378	31	**1955**
	Ostracoda	1	8	1	3	6	-	4	4	1	1	-	5	4	-	-	5	14	5	**62**
	Crustacea (nauplius)	-	-	-	1	1	2	-	1	-	4	-	1	1	1	1	-	3	-	**16**
Mollusca	Bivalvia	-	-	-	-	1	-	-	-	1	3	-	-	2	2	-	1	3	-	**13**
	Gastropoda	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	**3**
Annelida	Oligochaeta	-	-	1	1	3	-	27	3	9	-	19	-	-	-	-	-	-	8	**71**
	Sedentaria	-	-	1	-	-	-	1	-	-	2	1	2	1	-	-	-	2	-	**10**
	Errantia	-	-	-	-	-	-	1	1	-	2	2	-	2	-	-	3	2	1	**14**
Miscellaneous	Egg/egg mass	16	6	33	18	11	14	43	56	5	9	15	23	5	5	5	10	45	3	**322**
	Foraminifera	-	2	-	1	1	2	-	-	-	-	-	-	-	1	3	2	6	2	**20**
	Nemertea	1	-	1	-	1	1	1	2	-	-	-	1	-	-	-	-	-	-	**8**
	Platyhelminthes	-	-	-	1	2	-	8	7	3	-	-	1	-	-	-	-	-	-	**22**
	Rotifera	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	**3**
	Tardigrada	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	**1**

Taxonomic group	Taxon	Abundance (count of individuals)																		
		Kitkatla Creek Site									Head of Kitkatla Inlet Site									Total
		Low Zone			Mid Zone			High Zone			Low Zone			Mid Zone			High Zone			
		Q3	Q15	Q9	Q5	Q14	Q8	Q4	Q7	Q13	Q3	Q15	Q9	Q5	Q11	Q2	Q4	Q7	Q13	
	Invertebrate (larva)	-	-	4	-	-	-	7	36	-	1	-	-	-	-	-	-	-	-	**48**
Nematoda	Desmoscolecidae	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	**2**
	Nematoda	269	90	380	173	578	183	746	1401	22	94	120	356	109	100	52	86	958	43	**5760**
	Richtersia sp.	15	4	1	7	1	1	6	42	-	1	-	1	7	-	2	4	4	-	**96**
Cnidaria	Hydrozoa	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**
Total Abundance		**314**	**147**	**533**	**271**	**711**	**323**	**1125**	**1874**	**57**	**198**	**199**	**455**	**231**	**142**	**96**	**260**	**1418**	**94**	**8448**
Total Wet Weight (g)*		**0.001 365**	**0.000 843**	**0.002 453**	**0.001 278**	**0.003 395**	**0.001 512**	**0.005 572**	**0.008 501**	**0.000 659**	**0.001 075**	**0.001 164**	**0.002 138**	**0.001 292**	**0.000 747**	**0.000 443**	**0.001 45**	**0.007 014**	**0.000 66**	**0.041 564**

*Weights do not include memos, eggs/egg masses.

Table 2B. Lab results (Biologica Environmental Services Ltd.) from interidal biodiversity survey sediment samples – final weight (g) per grain size category. Results are summarized by quadrat with corresponding intertidal zone (low=0.8-1.5 m, mid=1.5-2.2 m, and high=2.2-3.0 m above mean low water elevation) and site.

Site	Zone	Quadrat	Cobble (>65.0 mm) (g)	Gravel – Coarse (32.0-65.0 mm) (g)	Gravel – Fine (2.00-32.0 mm) (g)	Sand – Coarse (0.500-2.00 mm) (g)	Sand – Medium (0.250-0.500 mm) (g)	Sand – Fine (0.063-0.250 mm) (g)	Mud/Silt/Clay (<0.063 mm) (g)	Sample Total Weight (g)
Kitkatla Creek	**Low**	**Q3**	0.00	0.00	27.01	7.49	67.32	153.62	95.58	**351.02**
		Q15	0.00	0.00	14.85	5.54	76.39	136.62	146.95	**380.35**
		Q9	0.00	0.00	12.86	4.12	68.20	146.11	97.55	**328.84**
	Mid	**Q5**	0.00	0.00	31.64	5.79	77.18	99.90	56.41	**270.92**
		Q14	0.00	0.00	151.54	1.64	93.47	54.49	57.46	**358.60**
		Q8	0.00	0.00	9.48	5.91	72.51	96.89	145.32	**330.11**
	High	**Q13**	0.00	0.00	67.02	1.47	49.39	13.62	21.04	**152.54**
		Q7	0.00	0.00	53.93	3.09	26.67	188.05	39.36	**311.10**
		Q4	0.00	0.00	99.76	3.33	40.16	112.36	57.34	**312.95**
Head of Kitkatla Inlet	**Low**	**Q3**	0.00	0.00	82.83	4.00	61.76	95.12	71.14	**314.85**
		Q9	0.00	0.00	156.62	2.19	27.11	39.93	41.68	**267.53**
		Q15	0	0	79.84	1.72	41.02	17.71	29.58	**169.87**
	Mid	**Q5**	0.00	0.00	102.62	1.11	58.51	46.38	78.08	**286.70**
		Q11	0	18.13	115.99	1.08	27.38	25.62	26.5	**214.70**
		Q2	0.00	0.00	123.08	1.56	88.16	54.37	61.19	**328.36**
	High	**Q4**	0.00	0.00	58.94	1.93	63.44	58.25	128.65	**311.21**
		Q7	0.00	0.00	52.29	3.71	28.00	101.53	54.15	**239.68**
		Q13	0	0	48.25	0.99	36.53	23.5	47.42	**156.69**
		Total	**0.00**	**18.13**	**1288.55**	**56.67**	**1003.20**	**1464.07**	**1255.40**	

Table 2C. Lab results (Biologica Environmental Services Ltd.) from interidal biodiversity survey sediment samples – chemistry (nitrogen, moisture, total organic carbon, total carbon, sulphur) reported on Aug 19, 2024.

Biologica Sampled ID	Site	Zone	Quadrat	% Nitrogen (N)	% Moisture	% Total Organic Carbon (C)	% Total Carbon	% Total Sulphur (S)
CHEM24-171-037	Kitkatla Creek	Low	3	0.046	18	0.29	0.33 (1)	0.13
CHEM24-171-038	Kitkatla Creek	High	4	0.047	16	0.28	0.39 (1)	0.10
CHEM24-171-039	Kitkatla Creek	Mid	5	0.054	16	0.34	0.47 (1)	0.12
CHEM24-171-040	Kitkatla Creek	High	7	0.022	15	0.22	0.50 (1)	0.08
CHEM24-171-041	Kitkatla Creek	Mid	8	0.045	16	0.16	0.19 (1)	0.11
CHEM24-171-042	Kitkatla Creek	Low	9	0.071	17	0.33	0.46 (1)	0.14
CHEM24-171-043	Kitkatla Creek	High	13	0.045	16	0.38	0.55 (1)	0.07
CHEM24-171-044	Kitkatla Creek	Mid	14	0.029	12	0.067	0.13 (1)	0.09
CHEM24-171-045	Kitkatla Creek	Low	15	0.043	16	0.24	0.27 (1)	0.13
CHEM24-171-046	Head of Kitkatla Inlet	Mid	2	0.041	17	0.38	0.49 (1)	0.11
CHEM24-171-047	Head of Kitkatla Inlet	Low	3	0.092	17	1.1	1.3 (1)	0.12
CHEM24-171-048	Head of Kitkatla Inlet	High	4	0.046	21	0.35	0.59 (1)	0.11
CHEM24-171-049	Head of Kitkatla Inlet	Mid	5	0.049	20	0.60	0.61 (1)	0.11
CHEM24-171-050	Head of Kitkatla Inlet	High	7	0.047	21	0.39	0.48 (1)	0.09
CHEM24-171-051	Head of Kitkatla Inlet	Low	9	0.073	1.0	<0.10	0.2 (1)	0.4
CHEM24-171-052	Head of Kitkatla Inlet	Mid	11	0.12	18	0.63	0.91 (1)	0.12
CHEM24-171-053	Head of Kitkatla Inlet	High	13	0.032	12	0.22	0.42 (1)	0.07
CHEM24-171-054	Head of Kitkatla Inlet	Low	15	0.032	14	0.22	1.8 (1)	0.06
Reportable Detection Limit (RDL)				**0.010**	**0.30**	**0.050**	**0.05**	**0.06**
QC Batch				**B483770**	**B481767**	**B482936**	**B482934**	**B482934**

Table 2D. Lab results (Biologica Environmental Services Ltd.) from intertidal biodiversity survey sediment samples – chemistry (nitrogen, moisture, total organic carbon, total carbon, sulphur) reported on March 6, 2025.

Biologica Sampled ID	Site	Zone	Quadrat	% Nitrogen (N)	% Total Organic Carbon (C)	% Total Carbon	% Total Sulphur (S)
CHEM24-171-037	Kitkatla Creek	Low	3	0.050	0.33	0.3 (1)	<0.1
CHEM24-171-038	Kitkatla Creek	High	4	0.035	0.25	0.2 (1)	<0.1
CHEM24-171-039	Kitkatla Creek	Mid	5	0.048	0.41	0.4 (1)	<0.1
CHEM24-171-040	Kitkatla Creek	High	7	0.053	0.22	0.2 (1)	<0.1
CHEM24-171-041	Kitkatla Creek	Mid	8	0.037	0.23	0.2 (1)	<0.1
CHEM24-171-042	Kitkatla Creek	Low	9	0.069	0.47	0.5 (2)	<0.1
CHEM24-171-043	Kitkatla Creek	High	13	0.11	0.48	1.1 (2)	<0.1
CHEM24-171-044	Kitkatla Creek	Mid	14	0.041	0.34	0.3 (1)	<0.1
CHEM24-171-045	Kitkatla Creek	Low	15	0.069	0.38	0.4 (1)	<0.1
CHEM24-171-046	Head of Kitkatla Inlet	Mid	2	0.081	0.40	1.0 (2)	<0.1
CHEM24-171-047	Head of Kitkatla Inlet	Low	3	0.12	0.69	0.7 (2)	0.1
CHEM24-171-048	Head of Kitkatla Inlet	High	4	0.089	0.49	1.0 (2)	<0.1
CHEM24-171-049	Head of Kitkatla Inlet	Mid	5	0.079	0.48	0.6 (2)	<0.1
CHEM24-171-050	Head of Kitkatla Inlet	High	7	0.088	0.50	0.5 (2)	<0.1
CHEM24-171-051	Head of Kitkatla Inlet	Low	9	0.19	1.5	2.1 (2)	0.1
CHEM24-171-052	Head of Kitkatla Inlet	Mid	11	0.16	0.90	1.0 (2)	0.1
CHEM24-171-053	Head of Kitkatla Inlet	High	13	0.045	0.50	0.6 (2)	<0.1
CHEM24-171-054	Head of Kitkatla Inlet	Low	15	0.056	0.24	1.7 (2)	<0.1
Reportable Detection Limit (RDL)						**0.1**	**0.1**
QC Batch						**B698854**	**B698854**

Appendix 3. Fish Taxa Detected from Shore-based Water Sampling for eDNA.

*Table 3A. Fish taxa detected from shore-based water collection for eDNA, as detected by 12s and 16s markers. Markers lacked species-level resolution capability for specific genera (e.g., rockfish, cod species). Site codes: BP – Baird Point; BI – Between Inlets; KC – Kitkatla Creek; GI – Gilbert Island; HK – Head of Kitkatla Inlet; KI – Kitkatla Islands; NP – North Porcher Island. * ecological conservation priorities for the Great Bear Sea MPA network in the NSB. ^ ecological or cultural conservation objectives for the Kitkatla Inlet Network Zones.*

				Site Code						
Class	**Order**	**Family**	**Species**	**BI**	**BP**	**KC**	**GI**	**HK**	**KI**	**NP**
Actinopteri	Argentiniformes	Bathylagidae		1	1	1	1	1	1	1
Actinopteri	Argentiniformes	Microstomatidae	*Nansenia* sp.	0	0	0	0	0	0	1
Actinopteri	Aulopiformes	Paralepididae	*Magnisudis atlantica*	1	1	1	1	1	1	1
Actinopteri	Aulopiformes	Paralepididae		0	0	0	0	0	0	1
Actinopteri	Beloniformes	Belonidae	*Cololabis saira*	1	0	0	0	0	1	0
Actinopteri	Beryciformes	Melamphaidae	*Poromitra crassiceps*	1	1	1	1	1	0	1
Actinopteri	Beryciformes	Melamphaidae		0	0	1	1	1	0	1
Actinopteri	Blenniiformes	Gobiesocidae	*Gobiesox maeandricus*	1	0	1	1	1	0	1
Actinopteri	Clupeiformes	Clupeidae	*Clupea pallasii^**	1	1	1	1	1	1	1
Actinopteri	Gadiformes	Gadidae	*Gadus macrocephalus**	0	0	0	1	0	0	0
Actinopteri	Gadiformes	Gadidae	*Gadus* sp.	1	1	1	1	1	1	1
Actinopteri	Gadiformes	Gadidae		0	0	0	1	0	0	0
Actinopteri	Gadiformes	Macrouridae		1	1	0	0	0	0	0
Actinopteri	Gadiformes	Merlucciidae	*Merluccius productus**	0	0	1	0	1	0	0
Actinopteri	Gadiformes	Moridae	*Antimora microlepis*	0	0	0	0	1	0	1
Actinopteri	Gadiformes			0	0	0	1	0	0	0
Actinopteri	Gobiiformes	Gobiidae	*Rhinogobiops nicholsii*	1	1	1	1	1	1	1
Actinopteri	Myctophiformes	Myctophidae	*Diaphus theta*	0	1	1	0	0	0	1
Actinopteri	Myctophiformes	Myctophidae	*Lampanyctus* sp.	1	1	1	0	0	0	1
Actinopteri	Myctophiformes	Myctophidae	*Stenobrachius leucopsarus**	1	1	1	0	0	1	1
Actinopteri	Myctophiformes	Myctophidae	*Stenobrachius* sp.	1	1	0	1	1	1	1
Actinopteri	Myctophiformes	Myctophidae	*Tarletonbeania crenularis*	1	1	1	1	1	1	1
Actinopteri	Osmeriformes	Osmeridae	*Hypomesus pretiosus**	1	1	1	1	1	1	1
Actinopteri	Osmeriformes	Osmeridae	*Mallotus villosus**	1	0	0	0	0	0	1
Actinopteri	Osmeriformes	Osmeridae	*Thaleichthys pacificus**	1	1	0	1	0	0	1
Actinopteri	Osmeriformes	Osmeridae		1	1	1	0	0	1	1
Actinopteri	Perciformes	Agonidae	*Agonopsis vulsa*	1	0	1	0	0	1	0
Actinopteri	Perciformes	Agonidae	*Blepsias cirrhosus*	0	0	1	1	0	1	1
Actinopteri	Perciformes	Agonidae	*Nautichthys oculofasciatus*	1	0	0	0	0	0	0
Actinopteri	Perciformes	Agonidae	*Xeneretmus leiops*	1	0	0	1	1	0	1
Actinopteri	Perciformes	Agonidae		1	1	1	0	0	1	1
Actinopteri	Perciformes	Anarhichadidae	*Anarrhichthys ocellatus**	1	1	0	1	1	0	1
Actinopteri	Perciformes	Anoplopomatidae	*Anoplopoma fimbria**	1	1	1	1	1	1	1
Actinopteri	Perciformes	Aulorhynchidae	*Aulorhynchus flavidus*	1	1	1	1	1	1	1
Actinopteri	Perciformes	Bathymasteridae	*Bathymaster signatus*	0	1	0	1	0	0	1
Actinopteri	Perciformes	Bathymasteridae	*Ronquilus jordani*	1	1	1	1	1	0	1
Actinopteri	Perciformes	Cottidae	*Artedius fenestralis*	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Artedius harringtoni*	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Artedius lateralis*	1	1	1	0	1	1	1
Actinopteri	Perciformes	Cottidae	*Artedius* sp.	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Ascelichthys rhodorus*	1	1	0	0	0	1	0
Actinopteri	Perciformes	Cottidae	*Asemichthys taylori*	0	0	0	0	0	1	0
Actinopteri	Perciformes	Cottidae	*Chitonotus pugetensis*	1	1	1	1	0	0	1
Actinopteri	Perciformes	Cottidae	*Clinocottus embryum*	0	1	0	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Cottus aleuticus*	0	0	1	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Cottus* sp.	0	1	1	0	1	1	1
Actinopteri	Perciformes	Cottidae	*Enophrys bison*	1	1	1	1	1	1	1

				Site Code						
Class	**Order**	**Family**	**Species**	**BI**	**BP**	**KC**	**GI**	**HK**	**KI**	**NP**
Actinopteri	Perciformes	Cottidae	*Hemilepidotus gilberti*	1	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Hemilepidotus hemilepidotus*	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Hemilepidotus* sp.	1	0	1	1	0	0	0
Actinopteri	Perciformes	Cottidae	*Icelinus borealis*	1	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Icelinus burchami*	1	0	1	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Icelinus filamentosus*	0	0	0	0	0	1	0
Actinopteri	Perciformes	Cottidae	*Icelinus* sp.	0	1	1	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Leptocottus armatus*	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Myoxocephalus polyacanthocephalus*	1	1	0	0	1	0	1
Actinopteri	Perciformes	Cottidae	*Myoxocephalus stelleri*	1	0	1	0	1	0	0
Actinopteri	Perciformes	Cottidae	*Myoxocephalus* sp.	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Oligocottus maculosus*	1	1	1	1	0	1	1
Actinopteri	Perciformes	Cottidae	*Oligocottus snyderi*	1	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Oligocottus* sp.	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Paracottus knerii*	0	0	1	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Scorpaenichthys marmoratus*	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Synchirus gilli*	0	1	1	1	1	0	1
Actinopteri	Perciformes	Cottidae	*Triglops pingelii*	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Triglops* sp.	0	0	0	0	1	0	0
Actinopteri	Perciformes	Cottidae		1	1	1	1	1	0	1
Actinopteri	Perciformes	Cryptacanthodidae	*Cryptacanthodes giganteus*	0	0	0	0	0	0	1
Actinopteri	Perciformes	Cryptacanthodidae	*Cryptacanthodes* sp.	1	0	1	0	0	1	1
Actinopteri	Perciformes	Gasterosteidae	*Gasterosteus aculeatus*	1	1	1	1	1	1	1
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos decagrammus*	1	1	1	1	1	1	1
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos stelleri*	0	0	0	0	0	0	1
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos* sp.	1	1	1	0	0	1	1
Actinopteri	Perciformes	Hexagrammidae	*Ophiodon elongatus^**	1	1	1	1	1	1	1
Actinopteri	Perciformes	Jordaniidae	*Jordania zonope*	1	1	1	0	1	0	1
Actinopteri	Perciformes	Liparidae	*Liparis florae*	0	0	0	0	1	0	1
Actinopteri	Perciformes	Liparidae	*Liparis fucensis*	1	0	0	0	0	0	0
Actinopteri	Perciformes	Liparidae	*Polypera greeni*	1	1	1	0	0	0	1
Actinopteri	Perciformes	Pholidae	*Apodichthys flavidus*	1	1	1	1	1	0	1
Actinopteri	Perciformes	Pholidae	*Pholis laeta*	0	1	1	0	1	0	1
Actinopteri	Perciformes	Pholidae	*Pholis* sp.	1	1	1	1	1	1	1
Actinopteri	Perciformes	Psychrolutidae	*Psychrolutes sigalutes*	0	0	1	0	0	1	1
Actinopteri	Perciformes	Psychrolutidae	*Psychrolutes* sp.	0	0	1	0	0	0	0
Actinopteri	Perciformes	Psychrolutidae		0	0	1	1	1	1	1
Actinopteri	Perciformes	Sebastidae	*Sebastes elongatus^**	1	1	1	0	1	1	1
Actinopteri	Perciformes	Sebastidae	*Sebastes entomelas^**	1	1	0	0	1	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes maliger^**	0	0	0	0	0	0	1
Actinopteri	Perciformes	Sebastidae	*Sebastes miniatus^**	0	1	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes mystinus^*	0	0	0	0	0	1	0
Actinopteri	Perciformes	Sebastidae	*Sebastes pinniger^**	0	1	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes rosaceus^*	0	0	0	0	0	0	1
Actinopteri	Perciformes	Sebastidae	*Sebastes serranoides^*	0	1	0	0	0	0	1
Actinopteri	Perciformes	Sebastidae	*Sebastes zacentrus^*	0	0	0	0	0	0	1
Actinopteri	Perciformes	Sebastidae	*Sebastes* sp.^	1	1	1	1	1	1	1
Actinopteri	Perciformes	Sebastidae	*Sebastolobus* sp.	1	1	1	1	1	1	1
Actinopteri	Perciformes	Sebastidae		1	1	1	1	0	1	1
Actinopteri	Perciformes	Stichaeidae	*Alectrias alectrolophus*	1	1	0	1	0	0	1
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus insignis*	0	1	0	1	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus purpurescens*	0	0	0	1	0	0	1
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus* sp.	1	1	1	1	1	1	1
Actinopteri	Perciformes	Stichaeidae	*Chirolophis* sp.	0	0	0	0	0	0	1
Actinopteri	Perciformes	Stichaeidae	*Phytichthys chirus*	0	0	0	0	0	0	1
Actinopteri	Perciformes	Stichaeidae	*Poroclinus rothrocki*	1	1	1	1	1	1	1

				Site Code						
Class	**Order**	**Family**	**Species**	**BI**	**BP**	**KC**	**GI**	**HK**	**KI**	**NP**
Actinopteri	Perciformes	Stichaeidae	*Stichaeus punctatus*	0	0	0	0	0	0	1
Actinopteri	Perciformes	Stichaeidae	*Xiphister atropurpureus*	1	1	0	0	0	0	1
Actinopteri	Perciformes	Stichaeidae	*Xiphister* sp.	1	1	1	1	1	1	1
Actinopteri	Perciformes	Stichaeidae		1	1	1	1	1	1	1
Actinopteri	Perciformes	Zoarcidae	*Lycodes brevipes*	1	0	0	0	0	0	1
Actinopteri	Perciformes	Zoarcidae	*Lycodes cortezianus*	1	1	0	0	0	0	0
Actinopteri	Perciformes			1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Cyclopsettidae	*Citharichthys sordidus*	1	0	0	0	0	0	1
Actinopteri	Pleuronectiformes	Cyclopsettidae	*Citharichthys stigmaeus*	1	0	0	0	0	0	1
Actinopteri	Pleuronectiformes	Cyclopsettidae	*Citharichthys* sp.	0	0	0	0	0	0	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Atheresthes stomias**	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Clidoderma asperrimum*	0	0	0	0	0	0	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Glyptocephalus zachirus**	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Hippoglossoides elassodon*	1	1	1	0	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Hippoglossus stenolepis^*	0	0	1	0	1	0	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lepidopsetta bilineata**	0	0	0	1	0	0	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lepidopsetta polyxystra*	0	0	0	0	1	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lepidopsetta* sp.	1	0	0	0	0	0	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Limanda aspera*	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lyopsetta exilis*	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Microstomus bathybius*	1	0	1	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Microstomus pacificus**	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Myzopsetta proboscidea*	0	0	0	1	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Platichthys stellatus*	1	0	0	0	1	0	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Pleuronichthys coenosus*	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Pleuronichthys decurrens*	1	1	1	0	1	0	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Pleuronichthys* sp.	1	0	0	1	0	0	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Psettichthys melanostictus*	1	0	0	0	1	0	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Reinhardtius hippoglossoides*	0	0	1	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae		1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus clarkii**	0	1	1	0	0	0	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha^**	1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus keta^**	1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus kisutch^**	1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus mykiss**	1	0	0	0	0	1	0
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus nerka^**	0	1	0	1	1	0	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha^**	0	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus* sp.	1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Salvelinus* sp.	1	0	1	0	0	1	0
Actinopteri	Salmoniformes	Salmonidae		1	1	1	0	0	1	0
Actinopteri	Scombriformes	Bramidae	*Brama japonica*	1	1	1	0	0	1	1
Actinopteri	Scombriformes	Icosteidae	*Icosteus aenigmaticus*	0	1	1	0	0	0	1
Actinopteri	Stomiiformes	Gonostomatidae	*Cyclothone atraria*	1	0	0	1	1	1	1
Actinopteri	Stomiiformes	Stomiidae	*Chauliodus macouni*	0	0	1	0	0	0	1
Actinopteri	Stomiiformes	Stomiidae	*Tactostoma macropus*	0	0	0	1	1	0	1
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes hexapterus^**	1	0	1	0	1	0	0
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes personatus*	1	0	1	0	0	1	1
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes* sp.	1	1	1	1	1	0	1
Actinopteri		Embiotocidae	*Cymatogaster aggregata**	1	1	1	1	1	1	1
Actinopteri		Embiotocidae	*Embiotoca lateralis*	0	0	0	1	0	0	0
Actinopteri		Embiotocidae	*Hyperprosopon anale*	1	0	1	0	1	1	1
Actinopteri		Embiotocidae		1	1	1	1	1	1	1
Chondrichthyes	Chimaeriformes	Chimaeridae	*Hydrolagus colliei*	1	1	1	1	1	1	1
Chondrichthyes	Lamniformes	Alopiidae	*Lamna ditropis**	1	0	1	1	0	1	1
Chondrichthyes	Rajiformes	Arhynchobatidae	*Bathyraja* sp.	1	1	1	0	1	1	1
Chondrichthyes	Rajiformes	Rajidae	*Amblyraja* sp.	0	0	0	1	0	1	0
Chondrichthyes	Rajiformes	Rajidae	*BeringRaja binoculata**	1	1	0	0	0	1	0

Appendix 4. Invertebrate Taxa Detected from Shore-based Water Sampling for eDNA.

*Table 4A. Invertebrate taxa detected from shore-based water collection for eDNA, as detected by COI markers. Site codes: BP – Baird Point; BI – Between Inlets; KC – Kitkatla Creek; GI – Gilbert Island; HK – Head of Kitkatla Inlet; KI – Kitkatla Islands; NP – North Porcher Island. * ecological conservation priorities for the Great Bear Sea MPA network in the Northern Shelf Bioregion. ^ ecological or cultural conservation objectives identified for the Kitkatla Inlet Network Zones.*

					Site Code						
Phylum	**Class**	**Order**	**Family**	**Species**	**BP**	**BI**	**KC**	**GI**	**HK**	**KI**	**NP**
Annelida	Clitellata	Enchytraeida	Enchytraeidae	Lumbricillus lineatus	0	1	1	0	0	0	1
Annelida	Clitellata	Enchytraeida	Enchytraeidae	Lumbricillus sp.	0	1	0	0	0	1	0
Annelida	Clitellata	Hirudinida	Erpobdellidae		0	0	1	0	0	0	0
Annelida	Clitellata	Tubificida	Naididae	Nais communis	0	1	1	0	1	1	1
Annelida	Clitellata	Tubificida	Naididae	Nais elinguis	0	0	0	0	1	0	0
Annelida	Clitellata	Tubificida	Naididae	Paranais litoralis	0	0	0	0	1	0	0
Annelida	Clitellata	Tubificida	Naididae		0	0	1	0	0	0	0
Annelida	Polychaeta	Echiuroidea	Thalassematidae	Arhynchite pugettensis	1	0	0	0	0	0	0
Annelida	Polychaeta	Eunicida	Eunicidae	Leodice valens	0	0	0	0	0	0	1
Annelida	Polychaeta	Eunicida	Lumbrineridae		1	0	0	0	0	0	1
Annelida	Polychaeta	Eunicida	Onuphidae	Diopatra sp.	0	0	0	1	0	0	0
Annelida	Polychaeta	Phyllodocida	Glyceridae	Glycera nana	0	0	0	0	0	1	1
Annelida	Polychaeta	Phyllodocida	Goniadidae	Glycinde sp.	0	0	0	0	0	0	1
Annelida	Polychaeta	Phyllodocida	Hesionidae	Micropodarke dubia	1	0	1	0	1	0	1
Annelida	Polychaeta	Phyllodocida	Nereididae	Alitta sp.	0	1	1	1	0	1	1
Annelida	Polychaeta	Phyllodocida	Nereididae	Micronereis nanaimoensis	0	0	0	0	0	0	1
Annelida	Polychaeta	Phyllodocida	Nereididae	Nereis vexillosa	1	1	1	1	1	0	1
Annelida	Polychaeta	Phyllodocida	Nereididae	Nereis sp.	0	1	0	1	0	0	1
Annelida	Polychaeta	Phyllodocida	Nereididae	Platynereis bicanaliculata	1	0	0	0	1	1	1
Annelida	Polychaeta	Phyllodocida	Nereididae	Platynereis sp.	1	1	1	1	1	0	1
Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida longicornuta	1	0	0	0	0	0	0
Annelida	Polychaeta	Phyllodocida	Phyllodocidae	Eumida sp.	1	0	0	0	0	0	0
Annelida	Polychaeta	Phyllodocida	Polynoidae	Arctonoe pulchra	1	1	0	0	0	0	1
Annelida	Polychaeta	Phyllodocida	Polynoidae	Arctonoe vittata	0	0	0	0	0	0	1
Annelida	Polychaeta	Phyllodocida	Polynoidae	Gattyana cirrhosa	0	0	0	1	0	0	0
Annelida	Polychaeta	Phyllodocida	Polynoidae	Grubeopolynoe tuta	0	0	0	0	1	0	0
Annelida	Polychaeta	Phyllodocida	Polynoidae	Halosydna brevisetosa	0	1	0	0	0	0	1
Annelida	Polychaeta	Phyllodocida	Polynoidae	Harmothoe imbricata	0	1	0	0	0	0	1
Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus squamatus	1	0	0	0	0	0	0
Annelida	Polychaeta	Phyllodocida	Polynoidae	Lepidonotus sp.	1	0	0	0	0	0	0
Annelida	Polychaeta	Phyllodocida	Polynoidae	Malmgreniella nigralba	0	1	0	0	0	0	1
Annelida	Polychaeta	Phyllodocida	Sigalionidae	Sthenelais berkeleyi	1	0	0	0	0	0	0
Annelida	Polychaeta	Phyllodocida	Syllidae	Syllis alternata	0	0	0	0	0	0	1

					Site Code						
Phylum	**Class**	**Order**	**Family**	**Species**	**BP**	**BI**	**KC**	**GI**	**HK**	**KI**	**NP**
Annelida	Polychaeta	Phyllodocida	Syllidae		0	1	1	1	0	1	1
Annelida	Polychaeta	Phyllodocida			1	1	0	1	0	0	1
Annelida	Polychaeta	Sabellida	Oweniidae	Galathowenia oculata	1	0	0	0	0	0	0
Annelida	Polychaeta	Sabellida	Sabellariidae	Neosabellaria cementarium	0	0	0	0	0	0	1
Annelida	Polychaeta	Sabellida	Sabellariidae		1	1	1	0	0	1	1
Annelida	Polychaeta	Sabellida	Sabellidae	Myxicola aesthetica	1	0	0	0	0	0	0
Annelida	Polychaeta	Sabellida	Sabellidae	Myxicola sp.	1	0	0	0	0	0	0
Annelida	Polychaeta	Sabellida	Sabellidae	Schizobranchia insignis	1	0	0	0	0	0	1
Annelida	Polychaeta	Sabellida	Sabellidae		0	1	0	0	0	0	0
Annelida	Polychaeta	Spionida	Spionidae	Boccardia proboscidea	0	0	0	0	0	0	1
Annelida	Polychaeta	Spionida	Spionidae	Laonice cirrata	1	0	0	0	0	0	0
Annelida	Polychaeta	Spionida	Spionidae	Laonice sp.	0	0	0	0	0	0	1
Annelida	Polychaeta	Spionida	Spionidae	Polydora onagawaensis	0	0	0	0	0	0	1
Annelida	Polychaeta	Spionida	Spionidae	Polydora sp.	0	0	0	1	0	0	0
Annelida	Polychaeta	Spionida	Spionidae	Prionospio multibranchiata	1	1	0	0	0	1	1
Annelida	Polychaeta	Spionida	Spionidae	Prionospio steenstrupi	1	0	0	0	1	0	0
Annelida	Polychaeta	Spionida	Spionidae	Prionospio sp.	0	0	0	0	0	0	1
Annelida	Polychaeta	Spionida	Spionidae	Pseudopolydora paucibranchiata	0	0	1	0	0	0	0
Annelida	Polychaeta	Spionida	Spionidae	Pygospio elegans	0	0	0	1	0	0	0
Annelida	Polychaeta	Spionida	Spionidae	Rhynchospio arenincola	1	0	0	0	0	0	1
Annelida	Polychaeta	Spionida	Spionidae	Scolelepis squamata	0	1	1	1	0	1	1
Annelida	Polychaeta	Spionida	Spionidae	Scolelepis sp.	0	0	0	0	0	0	1
Annelida	Polychaeta	Spionida	Spionidae	Spiophanes hakaiensis	0	1	0	0	0	0	1
Annelida	Polychaeta	Spionida	Spionidae	Spiophanes sp.	0	1	0	0	0	0	1
Annelida	Polychaeta	Spionida	Spionidae		1	1	0	1	0	1	1
Annelida	Polychaeta	Terebellida	Ampharetidae	Asabellides sp.	0	0	0	1	0	1	0
Annelida	Polychaeta	Terebellida	Ampharetidae		0	0	0	0	0	0	1
Annelida	Polychaeta	Terebellida	Cirratulidae	Cirratulus spectabilis	0	1	0	0	0	0	1
Annelida	Polychaeta	Terebellida	Cirratulidae	Dodecaceria sp.	1	0	1	0	1	1	1
Annelida	Polychaeta	Terebellida	Cirratulidae		1	1	1	0	0	1	1
Annelida	Polychaeta	Terebellida	Melinnidae	Melinna heterodonta	0	0	0	0	0	0	1
Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria californiensis	1	0	1	0	0	0	0
Annelida	Polychaeta	Terebellida	Pectinariidae	Pectinaria granulata	1	1	1	1	1	1	1
Annelida	Polychaeta	Terebellida	Terebellidae	Eupolymnia heterobranchia	1	0	1	0	1	1	1
Annelida	Polychaeta	Terebellida	Terebellidae	Neoamphitrite robusta	1	1	1	0	0	1	1
Annelida	Polychaeta	Terebellida	Terebellidae	Neoamphitrite sp.	1	1	1	0	0	1	1
Annelida	Polychaeta	Terebellida	Terebellidae	Nicolea sp.	1	0	0	0	0	0	0
Annelida	Polychaeta	Terebellida	Terebellidae	Pista wui	1	0	0	0	0	0	0
Annelida	Polychaeta	Terebellida	Terebellidae	Polycirrus sp.	1	0	0	0	0	0	1
Annelida	Polychaeta	Terebellida	Terebellidae	Thelepus sp.	0	0	0	0	0	0	1
Annelida	Polychaeta		Capitellidae	Dasybranchus sp.	0	0	1	0	1	0	0

					Site Code						
Phylum	**Class**	**Order**	**Family**	**Species**	**BP**	**BI**	**KC**	**GI**	**HK**	**KI**	**NP**
Annelida	Polychaeta		Capitellidae		1	0	0	0	0	0	1
Annelida	Polychaeta		Chaetopteridae	Mesochaetopterus taylori	1	1	1	0	1	1	0
Annelida	Polychaeta		Maldanidae	Axiothella rubrocincta	1	0	0	0	0	0	1
Annelida	Polychaeta		Opheliidae	Armandia brevis	1	1	1	1	1	1	1
Annelida	Polychaeta		Orbiniidae	Leitoscoloplos pugettensis	1	1	1	1	1	1	1
Annelida	Polychaeta		Orbiniidae	Naineris sp.	1	0	0	0	0	0	1
Annelida	Polychaeta		Orbiniidae		1	1	1	1	1	0	1
Annelida	Polychaeta		Saccocirridae	Saccocirrus sp.	1	1	0	0	0	0	1
Annelida	Polychaeta				1	1	0	0	1	0	0
Annelida	Sipuncula	Phascolosomatiformes	Phascolosomatidae	Phascolosoma agassizii	1	0	0	0	1	0	0
Arthropoda	Branchiopoda	Diplostraca	Podonidae	Evadne nordmanni	0	1	1	0	1	0	1
Arthropoda	Branchiopoda	Diplostraca	Podonidae	Evadne sp.	0	1	1	0	1	0	1
Arthropoda	Branchiopoda	Diplostraca	Podonidae	Podon leuckartii	0	0	0	0	0	0	1
Arthropoda	Hexanauplia	Calanoida	Acartiidae	Acartia longiremis	1	1	1	1	1	1	1
Arthropoda	Hexanauplia	Calanoida	Acartiidae	Acartia sp.	0	0	0	1	0	1	1
Arthropoda	Hexanauplia	Calanoida	Calanidae	Calanus marshallae	0	0	0	1	0	0	1
Arthropoda	Hexanauplia	Calanoida	Calanidae	Calanus pacificus	0	0	0	0	1	0	0
Arthropoda	Hexanauplia	Calanoida	Calanidae	Calanus sp.	1	0	1	1	0	1	1
Arthropoda	Hexanauplia	Calanoida	Calanidae		1	1	1	1	0	1	1
Arthropoda	Hexanauplia	Calanoida	Centropagidae	Centropages abdominalis	1	1	1	1	1	1	1
Arthropoda	Hexanauplia	Calanoida	Clausocalanidae	Pseudocalanus minutus	0	1	1	1	0	1	1
Arthropoda	Hexanauplia	Calanoida	Clausocalanidae	Pseudocalanus moultoni	0	0	0	1	0	0	1
Arthropoda	Hexanauplia	Calanoida	Clausocalanidae	Pseudocalanus newmani	1	1	1	1	1	1	1
Arthropoda	Hexanauplia	Calanoida	Clausocalanidae	Pseudocalanus sp.	1	1	1	1	1	1	1
Arthropoda	Hexanauplia	Calanoida	Metridinidae	Metridia pacifica	1	0	1	0	0	1	0
Arthropoda	Hexanauplia	Calanoida	Paracalanidae	Paracalanus parvus	1	1	1	1	1	1	1
Arthropoda	Hexanauplia	Calanoida	Paracalanidae	Paracalanus sp.	1	1	1	1	1	1	1
Arthropoda	Hexanauplia	Calanoida	Pontellidae	Epilabidocera amphitrites	1	1	0	0	0	0	1
Arthropoda	Hexanauplia	Calanoida	Tortanidae	Tortanus discaudatus	0	0	1	0	1	0	0
Arthropoda	Hexanauplia	Cyclopoida	Cyclopidae	Euryte sp.	0	0	1	0	0	0	0
Arthropoda	Hexanauplia	Cyclopoida	Cyclopidae		0	0	0	0	1	0	0
Arthropoda	Hexanauplia	Cyclopoida	Oithonidae	Oithona similis	0	1	0	0	0	1	1
Arthropoda	Hexanauplia	Harpacticoida	Ameiridae	Ameira sp.	0	0	1	0	0	1	0
Arthropoda	Hexanauplia	Harpacticoida	Harpacticidae	Harpacticus uniremis	0	0	0	0	0	1	0
Arthropoda	Hexanauplia	Harpacticoida	Laophontidae	Paralaophonte sp.	0	0	1	0	0	0	0
Arthropoda	Hexanauplia	Harpacticoida	Miraciidae	Amonardia perturbata	0	0	0	0	0	0	1
Arthropoda	Hexanauplia	Harpacticoida	Miraciidae	Amphiascoides sp.	0	0	0	0	0	0	1
Arthropoda	Hexanauplia	Harpacticoida	Miraciidae	Amphiascopsis cinctus	0	0	0	0	0	0	1
Arthropoda	Hexanauplia	Harpacticoida	Miraciidae	Diosaccus spinatus	1	1	0	1	0	1	1
Arthropoda	Hexanauplia	Harpacticoida	Tisbidae	Scutellidium sp.	0	0	0	0	0	0	1
Arthropoda	Hexanauplia	Harpacticoida	Tisbidae	Tisbe sp.	1	1	0	0	0	0	1

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Arthropoda	Hexanauplia	Harpacticoida			0	0	1	1	0	1	1
Arthropoda	Hexanauplia	Poecilostomatoida			0	1	0	0	0	0	1
Arthropoda	Hexanauplia				0	0	0	1	1	0	0
Arthropoda	Malacostraca	Amphipoda	Ampithoidae	Ampithoe lacertosa	0	1	0	0	0	0	0
Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoroides columbiae	0	0	0	0	0	0	1
Arthropoda	Malacostraca	Amphipoda	Aoridae	Aoroides intermedius	0	0	0	0	0	0	1
Arthropoda	Malacostraca	Amphipoda	Aoridae		0	0	0	0	0	1	0
Arthropoda	Malacostraca	Amphipoda	Calliopiidae	Calliopius ezoensis	0	1	0	0	0	0	1
Arthropoda	Malacostraca	Amphipoda	Calliopiidae	Calliopius sp.	0	0	0	0	0	0	1
Arthropoda	Malacostraca	Amphipoda	Corophiidae		0	0	0	0	1	1	0
Arthropoda	Malacostraca	Amphipoda	Hyalidae		0	1	0	0	1	0	1
Arthropoda	Malacostraca	Amphipoda	Melitidae		0	0	0	0	0	0	1
Arthropoda	Malacostraca	Amphipoda	Pontogeneiidae	Paramoera bousfieldi	0	1	0	0	0	0	1
Arthropoda	Malacostraca	Amphipoda	Talitridae		0	1	1	0	0	1	1
Arthropoda	Malacostraca	Amphipoda			0	0	0	0	0	1	1
Arthropoda	Malacostraca	Decapoda	Atelecyclidae	Telmessus cheiragonus	0	0	0	0	0	0	1
Arthropoda	Malacostraca	Decapoda	Callianassidae	Neotrypaea sp.	0	0	0	0	0	0	1
Arthropoda	Malacostraca	Decapoda	Cancridae	Cancer productus	0	1	0	0	0	0	1
Arthropoda	Malacostraca	Decapoda	Epialtidae	Pugettia gracilis	1	0	0	0	0	0	1
Arthropoda	Malacostraca	Decapoda	Epialtidae	Pugettia producta	0	0	1	0	0	0	0
Arthropoda	Malacostraca	Decapoda	Lithodidae	Phyllolithodes papillosus	1	0	0	0	0	0	0
Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus beringanus	1	0	0	1	0	0	0
Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus caurinus	0	0	0	1	0	0	0
Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus granosimanus	0	0	0	0	0	0	1
Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus hirsutiusculus	0	1	1	0	0	0	1
Arthropoda	Malacostraca	Decapoda	Paguridae	Pagurus sp.	1	0	0	0	0	0	0
Arthropoda	Malacostraca	Decapoda	Pandalidae	Pandalus danae*	0	0	0	0	0	0	1
Arthropoda	Malacostraca	Decapoda	Panopeidae	Lophopanopeus bellus	0	0	0	0	0	0	1
Arthropoda	Malacostraca	Decapoda	Porcellanidae	Petrolisthes eriomerus	1	0	0	0	0	0	1
Arthropoda	Malacostraca	Decapoda	Varunidae	Hemigrapsus nudus	1	1	1	0	1	1	1
Arthropoda	Malacostraca	Decapoda	Varunidae	Hemigrapsus oregonensis	0	0	1	0	1	1	1
Arthropoda	Malacostraca	Euphausiacea*			1	0	0	1	1	0	1
Arthropoda	Malacostraca	Isopoda	Idoteidae	Pentidotea wosnesenskii	0	0	0	0	0	1	0
Arthropoda	Thecostraca	Balanomorpha	Balanidae	Balanus crenatus	0	1	1	1	0	1	1
Arthropoda	Thecostraca	Balanomorpha	Balanidae	Balanus glandula	1	1	1	1	1	1	1
Arthropoda	Thecostraca	Balanomorpha	Balanidae	Balanus nubilus	1	1	1	1	0	0	1
Arthropoda	Thecostraca	Balanomorpha	Balanidae	Balanus sp.	1	1	1	1	1	1	1
Arthropoda	Thecostraca	Balanomorpha	Balanidae	Semibalanus balanoides	1	1	1	1	1	1	1
Arthropoda	Thecostraca	Balanomorpha	Balanidae	Semibalanus cariosus	1	1	1	1	0	1	1
Arthropoda	Thecostraca	Balanomorpha	Balanidae	Solidobalanus engbergi	1	0	0	0	0	0	1
Arthropoda	Thecostraca	Balanomorpha	Balanidae		0	0	1	1	0	1	0

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Arthropoda	Thecostraca	Balanomorpha	Chthamalidae	Chthamalus dalli	1	1	1	1	1	1	1
Arthropoda	Thecostraca	Balanomorpha	Chthamalidae		1	1	1	0	1	1	1
Bryozoa	Gymnolaemata	Cheilostomatida	Calloporidae	Cauloramphus sp.	1	0	0	1	0	0	0
Bryozoa	Gymnolaemata	Cheilostomatida	Hippothoidae	Celleporella hyalina	1	0	0	1	0	0	1
Bryozoa	Gymnolaemata	Ctenostomatida	Alcyonidiidae	Alcyonidium sp.	1	1	1	0	0	0	1
Bryozoa	Gymnolaemata	Ctenostomatida	Vesiculariidae	Amathia sp.	0	0	0	0	0	1	0
Chordata	Ascidiacea	Stolidobranchia	Pyuridae	Halocynthia aurantium	0	0	0	0	0	0	1
Cnidaria	Anthozoa	Actiniaria	Actiniidae	Anthopleura sp.	0	1	0	0	0	0	0
Cnidaria	Anthozoa	Actiniaria	Actiniidae	Epiactis sp.	0	0	0	0	0	0	1
Cnidaria	Anthozoa	Actiniaria	Edwardsiidae	Edwardsia sp.	0	0	0	0	0	0	1
Cnidaria	Anthozoa	Actiniaria	Edwardsiidae		0	0	0	0	0	0	1
Cnidaria	Anthozoa	Actiniaria	Metridiidae	Metridium senile	1	0	1	1	1	1	1
Cnidaria	Anthozoa	Actiniaria	Metridiidae	Metridium sp.	1	0	1	1	1	1	1
Cnidaria	Anthozoa	Actiniaria			1	1	0	0	1	1	1
Cnidaria	Anthozoa	Scleralcyonacea*			0	0	0	0	0	0	1
Cnidaria	Hydrozoa	Anthoathecata	Corynidae	Sarsia tubulosa	0	0	1	0	1	0	1
Cnidaria	Hydrozoa	Anthoathecata	Corynidae		0	1	0	0	0	0	1
Cnidaria	Hydrozoa	Anthoathecata	Pandeidae	Halitholus sp.	0	1	1	0	1	1	1
Cnidaria	Hydrozoa	Anthoathecata	Pandeidae	Leuckartiara longicalcar	0	0	0	0	0	0	1
Cnidaria	Hydrozoa	Anthoathecata	Pandeidae	Neoturris breviconis	0	0	0	0	0	0	1
Cnidaria	Hydrozoa	Anthoathecata	Pandeidae	Stomotoca atra	0	1	0	0	0	0	1
Cnidaria	Hydrozoa	Anthoathecata	Proboscidactylidae	Proboscidactyla flavicirrata	1	1	1	0	0	0	0
Cnidaria	Hydrozoa	Anthoathecata	Tubulariidae	Ectopleura viridis	1	0	0	0	0	0	0
Cnidaria	Hydrozoa	Leptothecata	Aequoreidae	Aequorea sp.	1	1	1	0	1	0	1
Cnidaria	Hydrozoa	Leptothecata	Clytiidae	Clytia gregaria	1	1	1	1	1	1	1
Cnidaria	Hydrozoa	Leptothecata	Clytiidae	Clytia sp.	0	1	1	0	1	0	1
Cnidaria	Hydrozoa	Leptothecata	Eirenidae	Eutonina indicans	1	1	0	1	0	0	1
Cnidaria	Hydrozoa	Leptothecata	Lafoeidae	Lafoea dumosa	1	0	0	0	0	0	0
Cnidaria	Hydrozoa	Leptothecata	Mitrocomidae	Mitrocoma cellularia	1	0	1	1	0	1	1
Cnidaria	Hydrozoa	Leptothecata	Mitrocomidae	Mitrocomella polydiademata	0	1	0	0	0	0	0
Cnidaria	Hydrozoa	Leptothecata			0	0	1	0	0	0	1
Cnidaria	Hydrozoa	Siphonophorae	Agalmatidae	Nanomia sp.	1	0	0	0	0	0	1
Cnidaria	Hydrozoa	Siphonophorae	Diphyidae	Chelophyes appendiculata	1	1	0	1	0	1	1
Cnidaria	Hydrozoa				1	0	1	0	1	0	1
Cnidaria	Scyphozoa	Semaeostomeae	Cyaneidae	Cyanea sp.	1	0	1	1	0	1	1
Cnidaria	Scyphozoa	Semaeostomeae	Ulmaridae	Phacellophora camtschatica	0	0	0	0	0	0	1
Cnidaria	Scyphozoa	Semaeostomeae	Ulmaridae		0	0	0	0	0	0	1
Ctenophora	Nuda	Beroida	Beroidae	Beroe abyssicola	0	0	0	0	0	0	1
Ctenophora	Tentaculata	Lobata	Bolinopsidae	Bolinopsis microptera	1	1	1	1	1	1	1
Echinodermata	Asteroidea	Forcipulatida	Asteriidae	Evasterias troschelii	1	1	1	1	1	1	1
Echinodermata	Asteroidea	Forcipulatida	Asteriidae	Leptasterias hexactis	0	0	1	1	0	1	1

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Echinodermata	Asteroidea	Forcipulatida	Asteriidae	Leptasterias sp.	0	0	0	0	0	0	1
Echinodermata	Asteroidea	Forcipulatida	Asteriidae	Pisaster brevispinus	0	1	0	0	0	1	1
Echinodermata	Asteroidea	Forcipulatida	Asteriidae	Pisaster ochraceus*	1	1	1	0	0	1	1
Echinodermata	Asteroidea	Paxillosida	Luidiidae	Luidia foliolata	0	1	1	1	0	1	1
Echinodermata	Asteroidea	Valvatida	Poraniidae	Dermasterias imbricata	1	0	0	0	1	0	1
Echinodermata	Echinoidea	Camarodonta	Strongylocentrotidae	Allocentrotus fragilis	0	0	0	0	0	0	1
Echinodermata	Echinoidea	Camarodonta	Strongylocentrotidae	Mesocentrotus franciscanus^*	1	0	1	1	1	1	1
Echinodermata	Echinoidea	Camarodonta	Strongylocentrotidae	Strongylocentrotus droebachiensis^*	1	1	1	1	0	1	1
Echinodermata	Echinoidea	Camarodonta	Strongylocentrotidae	Strongylocentrotus pallidus	1	0	0	0	0	1	1
Echinodermata	Echinoidea	Camarodonta	Strongylocentrotidae	Strongylocentrotus purpuratus^	1	0	0	0	0	0	0
Echinodermata	Echinoidea	Camarodonta	Strongylocentrotidae	Strongylocentrotus sp.	1	1	1	1	0	1	1
Echinodermata	Echinoidea	Clypeasteroida	Dendrasteridae	Dendraster excentricus	1	0	0	0	0	0	0
Echinodermata	Echinoidea	Spatangoida	Schizasteridae	Brisaster latifrons	0	0	0	0	0	0	1
Echinodermata	Holothuroidea	Apodida	Synaptidae	Leptosynapta clarki	0	1	0	0	1	0	0
Echinodermata	Holothuroidea	Aspidochirotida	Stichopodidae	Apostichopus californicus	1	1	1	1	1	1	1
Echinodermata	Holothuroidea	Dendrochirotida	Cucumariidae	Cucumaria miniata	1	1	1	0	1	1	1
Echinodermata	Holothuroidea	Dendrochirotida	Cucumariidae	Cucumaria piperata	0	0	0	0	0	1	0
Echinodermata	Holothuroidea	Dendrochirotida	Cucumariidae	Cucumaria vegae	1	0	1	0	0	0	0
Echinodermata	Holothuroidea	Dendrochirotida	Cucumariidae		0	0	1	0	0	0	0
Echinodermata	Holothuroidea	Dendrochirotida	Phyllophoridae	Pentamera lissoplaca	0	0	0	0	0	0	1
Echinodermata	Holothuroidea	Dendrochirotida	Phyllophoridae		1	0	0	0	0	1	0
Echinodermata	Holothuroidea	Dendrochirotida	Psolidae	Psolus chitonoides	0	1	0	0	0	0	1
Echinodermata	Holothuroidea	Dendrochirotida	Sclerodactylidae	Eupentacta sp.	0	0	1	0	0	0	0
Echinodermata	Ophiuroidea	Amphilepidida	Amphiuridae	Amphiodia occidentalis	0	0	1	0	0	1	1
Echinodermata	Ophiuroidea	Amphilepidida	Amphiuridae	Amphipholis sp.	1	0	0	0	0	0	0
Echinodermata	Ophiuroidea	Amphilepidida	Ophiactidae	Ophiopholis aculeata	1	0	0	0	0	0	0
Echinodermata	Ophiuroidea	Amphilepidida	Ophiactidae	Ophiopholis kennerlyi	1	0	1	0	0	1	1
Echinodermata	Ophiuroidea	Amphilepidida	Ophiactidae	Ophiopholis sp.	1	0	1	0	1	1	1
Echinodermata	Ophiuroidea	Amphilepidida	Ophiuridae	Ophiura luetkenii	1	0	0	0	0	0	1
Echinodermata	Ophiuroidea	Amphilepidida			1	0	0	0	0	0	1
Mollusca	Bivalvia	Adapedonta	Hiatellidae	Hiatella arctica	1	1	1	0	1	0	1
Mollusca	Bivalvia	Adapedonta	Hiatellidae	Panopea generosa*	1	1	1	1	1	0	1
Mollusca	Bivalvia	Cardiida	Cardiidae	Clinocardium nuttallii*	1	1	1	1	1	1	1
Mollusca	Bivalvia	Cardiida	Tellinidae	Ameritella modesta	0	0	0	0	1	0	0
Mollusca	Bivalvia	Cardiida	Tellinidae	Macoma balthica	0	0	1	0	1	1	1
Mollusca	Bivalvia	Cardiida	Tellinidae	Macoma nasuta	1	1	1	1	1	1	1
Mollusca	Bivalvia	Galeommatida	Lasaeidae	Kellia suborbicularis	1	0	1	0	1	1	1
Mollusca	Bivalvia	Lucinida	Thyasiridae	Axinopsida serricata	0	0	0	1	0	0	0
Mollusca	Bivalvia	Myida	Myidae	Mya arenaria	1	1	1	0	1	0	1
Mollusca	Bivalvia	Myida	Myidae	Mya truncata	1	0	0	0	1	0	1
Mollusca	Bivalvia	Myida	Myidae	Mya sp.	0	1	0	0	0	0	1

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Mollusca	Bivalvia	Myida	Teredinidae	Bankia setacea	0	0	0	0	0	1	0
Mollusca	Bivalvia	Myida	Xylophagaidae	Xylophaga washingtona	0	0	0	0	0	0	1
Mollusca	Bivalvia	Mytilida	Mytilidae	Modiolus modiolus	1	1	0	1	0	0	1
Mollusca	Bivalvia	Mytilida	Mytilidae	Mytilus trossulus	1	1	1	1	1	1	1
Mollusca	Bivalvia	Mytilida	Mytilidae	Mytilus sp.	1	1	1	1	1	1	0
Mollusca	Bivalvia	Venerida	Mactridae	Tresus capax*	0	0	0	0	1	1	1
Mollusca	Bivalvia	Venerida	Mactridae	Tresus sp.	0	0	0	0	1	1	1
Mollusca	Bivalvia	Venerida	Turtoniidae	Turtonia minuta	0	0	1	1	0	0	1
Mollusca	Bivalvia	Venerida	Veneridae	Compsomyax subdiaphana	0	0	1	0	0	1	1
Mollusca	Bivalvia	Venerida	Veneridae	Humilaria kennerleyi	1	0	0	0	1	0	1
Mollusca	Bivalvia	Venerida	Veneridae	Leukoma staminea^*	0	1	0	0	1	0	0
Mollusca	Bivalvia	Venerida	Veneridae	Saxidomus gigantea^*	1	1	1	1	1	1	1
Mollusca	Cephalopoda	Octopoda	Octopodidae	Enteroctopus dofleini^*	0	0	0	0	0	0	1
Mollusca	Cephalopoda	Octopoda	Octopodidae		0	0	0	0	0	0	1
Mollusca	Cephalopoda	Oegopsida	Gonatidae		0	0	0	0	0	0	1
Mollusca	Gastropoda	Cephalaspidea	Gastropteridae	Gastropteron pacificum	0	0	0	0	0	0	1
Mollusca	Gastropoda	Cephalaspidea	Haminoeidae	Haminoea sp.	0	0	0	0	0	1	0
Mollusca	Gastropoda	Littorinimorpha	Lacunidae	Lacuna variegata	0	0	0	0	1	1	1
Mollusca	Gastropoda	Littorinimorpha	Lacunidae	Lacuna vincta	0	0	1	1	0	1	1
Mollusca	Gastropoda	Littorinimorpha	Littorinidae	Littorina plena*	1	1	1	0	1	1	1
Mollusca	Gastropoda	Littorinimorpha	Littorinidae	Littorina scutulata*	0	1	0	0	0	1	1
Mollusca	Gastropoda	Littorinimorpha	Littorinidae	Littorina sitkana*	1	1	1	1	1	1	1
Mollusca	Gastropoda	Littorinimorpha	Littorinidae	Littorina subrotundata*	0	1	0	0	0	0	0
Mollusca	Gastropoda	Littorinimorpha	Littorinidae	Littorina sp.*	0	1	0	0	0	1	1
Mollusca	Gastropoda	Neogastropoda	Columbellidae	Amphissa columbiana	1	0	0	0	0	0	0
Mollusca	Gastropoda	Neogastropoda	Muricidae	Nucella emarginata	0	0	1	0	0	0	0
Mollusca	Gastropoda	Neogastropoda	Muricidae	Nucella lamellosa	0	0	0	1	0	0	1
Mollusca	Gastropoda	Neogastropoda	Muricidae	Nucella ostrina	0	1	1	1	1	0	1
Mollusca	Gastropoda	Nudibranchia	Apataidae	Apata pricei	0	0	0	0	0	0	1
Mollusca	Gastropoda	Nudibranchia	Coryphellidae	Coryphella verrucosa	0	0	0	1	0	1	0
Mollusca	Gastropoda	Nudibranchia	Eubranchidae	Eubranchus rustyus	0	0	0	0	0	1	0
Mollusca	Gastropoda	Nudibranchia	Glaucidae	Hermissenda crassicornis	0	0	0	0	0	0	1
Mollusca	Gastropoda	Nudibranchia	Onchidorididae	Diaphorodoris lirulatocauda	0	0	1	0	0	0	0
Mollusca	Gastropoda	Nudibranchia	Onchidorididae	Onchidoris bilamellata	0	0	0	0	1	0	0
Mollusca	Gastropoda	Nudibranchia			0	1	0	1	0	1	1
Mollusca	Gastropoda	Pteropoda	Clionidae	Clione limacina	0	0	0	0	0	0	1
Mollusca	Gastropoda	Pteropoda	Clionidae	Clione sp.	0	0	0	0	0	0	1
Mollusca	Gastropoda	Trochida	Margaritidae	Margarites pupillus	1	1	1	1	1	1	1
Mollusca	Gastropoda	Trochida	Margaritidae	Margarites sp.	1	1	1	1	1	1	1
Mollusca	Gastropoda	Trochida	Tegulidae	Tegula pulligo	1	0	0	0	0	0	0
Mollusca	Gastropoda	Trochida	Trochidae	Lirularia succincta	0	1	0	0	0	0	0

					Site Code						
Phylum	**Class**	**Order**	**Family**	**Species**	**BP**	**BI**	**KC**	**GI**	**HK**	**KI**	**NP**
Mollusca	Gastropoda		Acmaeidae	Acmaea mitra	1	0	0	0	0	0	0
Mollusca	Gastropoda		Limapontiidae	Alderia modesta	0	0	0	0	1	0	0
Mollusca	Gastropoda		Limapontiidae	Placida dendritica	0	0	1	1	0	1	0
Mollusca	Gastropoda		Lottiidae	Lottia digitalis	1	0	0	0	0	1	1
Mollusca	Gastropoda		Lottiidae	Lottia paradigitalis	1	1	1	1	1	1	1
Mollusca	Gastropoda		Lottiidae	Lottia pelta	0	0	1	1	0	0	1
Mollusca	Gastropoda		Lottiidae	Lottia scutum	1	1	1	1	1	1	1
Mollusca	Gastropoda		Lottiidae	Lottia sp.	1	1	1	1	1	1	1
Mollusca	Polyplacophora	Chitonida	Mopaliidae	Katharina tunicata	0	1	0	0	0	0	1
Mollusca	Polyplacophora	Chitonida	Mopaliidae	Mopalia kennerleyi	0	0	0	0	0	0	1
Mollusca	Polyplacophora	Chitonida	Mopaliidae	Tonicella insignis	0	0	0	0	0	0	1
Mollusca	Polyplacophora	Chitonida	Mopaliidae	Tonicella lineata	1	0	0	0	1	0	0
Mollusca	Polyplacophora	Chitonida	Mopaliidae	Tonicella sp.	1	0	0	0	0	0	0
Mollusca	Polyplacophora	Chitonida	Tonicellidae	Cyanoplax dentiens	1	0	1	0	1	0	1
Mollusca	Polyplacophora	Chitonida			1	0	0	0	0	0	0
Nematoda	Chromadorea	Chromadorida	Chromadoridae		0	0	0	0	1	0	1
Nemertea	Enopla	Monostilifera	Carcinonemertidae	Carcinonemertes sp.	0	0	0	0	0	0	1
Nemertea	Enopla	Monostilifera	Emplectonematidae	Emplectonema sp.	1	1	0	1	0	0	1
Nemertea	Enopla	Monostilifera	Emplectonematidae	Paranemertes peregrina	0	0	0	0	0	0	1
Nemertea	Enopla	Monostilifera	Emplectonematidae	Paranemertes sp.	0	0	1	0	1	1	1
Nemertea	Enopla	Monostilifera	Ototyphlonemertidae	Ototyphlonemertes sp.	0	0	1	0	0	0	0
Nemertea	Enopla	Monostilifera	Poseidonemertidae	Poseidonemertes sp.	0	0	0	0	0	0	1
Nemertea	Enopla	Monostilifera	Prosorhochmidae	Pantinonemertes californiensis	0	1	0	0	0	1	1
Nemertea	Enopla	Monostilifera			0	1	0	0	0	0	0
Nemertea	Palaeonemertea	Archinemertea	Cephalotrichidae	Cephalothrix sp.	0	0	0	0	0	1	1
Nemertea	Palaeonemertea	Tubulaniformes	Tubulanidae	Tubulanus sp.	1	1	0	1	0	0	1
Nemertea	Pilidiophora	Heteronemertea	Lineidae	Cerebratulus sp.	1	0	0	0	0	0	1
Nemertea	Pilidiophora	Heteronemertea	Lineidae	Lineus sp.	0	0	0	0	0	0	1
Nemertea	Pilidiophora	Heteronemertea	Lineidae	Kulikovia montgomeryi	0	0	1	0	0	0	0
Nemertea	Pilidiophora	Heteronemertea	Lineidae	Maculaura alaskensis	1	0	0	0	0	0	0
Nemertea	Pilidiophora	Heteronemertea	Lineidae	Maculaura aquilonia	1	0	1	0	0	0	1
Nemertea	Pilidiophora	Heteronemertea	Lineidae	Micrura sp.	0	1	0	0	0	0	0
Nemertea	Pilidiophora	Heteronemertea	Riseriellidae	Riserius pugetensis	0	0	0	0	0	0	1
Nemertea	Pilidiophora	Heteronemertea	Riseriellidae	Riserius sp.	0	1	0	0	0	0	1
Phoronida			Phoronidae	Phoronis vancouverensis	1	0	0	0	0	1	1
Phoronida			Phoronidae	Phoronopsis harmeri	1	1	1	1	1	1	1
Platyhelminthes	Rhabditophora	Polycladida	Notocomplanidae	Notocomplana sp.	0	0	0	1	0	0	0
Platyhelminthes	Rhabditophora	Polycladida			1	1	1	0	0	0	1
Platyhelminthes	Rhabditophora	Rhabdocoela	Trigonostomidae	Astrotorhynchus hakaiensis	0	1	0	1	0	1	1
Porifera	Demospongiae*	Biemnida	Biemnidae	Biemna sp.	0	0	0	1	0	0	0
Porifera	Demospongiae*	Clionaida	Clionaidae	Cliona sp.	1	0	0	0	0	0	1

					Site Code						
Phylum	**Class**	**Order**	**Family**	**Species**	**BP**	**BI**	**KC**	**GI**	**HK**	**KI**	**NP**
Porifera	Demospongiae*	Desmacellida	Desmacellidae	Desmacella sp.	0	0	0	0	0	0	1
Porifera	Demospongiae*	Poecilosclerida	Microcionidae	Clathria sp.	0	0	0	0	0	0	1
Porifera	Demospongiae*	Poecilosclerida	Microcionidae		0	0	0	0	0	0	1
Porifera	Demospongiae*	Suberitida	Halichondriidae	Halichondria panicea	1	1	1	1	1	1	1
Porifera	Demospongiae*	Suberitida	Halichondriidae	Halichondria sp.	0	0	0	0	0	0	1
Porifera	Demospongiae*	Suberitida	Suberitidae	Protosuberites sp.	0	0	0	0	0	0	1
Porifera	Demospongiae*	Suberitida	Suberitidae	Suberites sp.	0	0	0	0	0	0	1
Porifera	Demospongiae*	Suberitida	Suberitidae		0	1	0	0	0	0	1
Porifera	Demospongiae*	Tethyida	Timeidae	Timea sp.	1	0	0	0	0	0	0
Porifera	Demospongiae*				1	0	0	0	1	0	0
Porifera	Hexactinellida*	Sceptrulophora	Aphrocallistidae	Aphrocallistes vastus*	0	0	0	0	0	0	1

Appendix 5. Fish Taxa Detected from Small Boat Sampling for eDNA in the Goschen RCA.

*Table 5A. Fish taxa detected from small boat sampling for eDNA in the Goschen RCA, as detected by 12s and 16s markers. Markers lacked species-level resolution capability for specific genera (e.g., rockfish, cod species). Site codes have a "G" referring to Groschen RCA, followed by an "I" or an "O" referencing whether the sample was taken from inside or outside the RCAs boundaries, and a number 1-3 to differentiate sample locations. * ecological conservation priorities for the Great Bear Sea MPA network in the NSB. ^ ecological or cultural conservation objectives for the Kitkatla Inlet Network Zones.*

				Site Codes					
Class	**Order**	**Family**	**Species**	**GI1**	**GI2**	**GI3**	**GO1**	**GO2**	**GO3**
Actinopteri	Argentiniformes	Bathylagidae		1	1	1	1	1	1
Actinopteri	Aulopiformes	Paralepididae	*Magnisudis atlantica*	1	0	1	1	1	1
Actinopteri	Beloniformes	Belonidae	*Cololabis saira*	1	0	0	0	1	1
Actinopteri	Beryciformes	Melamphaidae	*Poromitra crassiceps*	1	0	1	0	1	1
Actinopteri	Beryciformes	Melamphaidae		0	0	1	0	1	1
Actinopteri	Blenniiformes	Gobiesocidae	*Gobiesox maeandricus*	0	0	1	1	1	1
Actinopteri	Blenniiformes	Gobiesocidae	*Gobiesox* sp.	0	0	0	1	0	0
Actinopteri	Clupeiformes	Clupeidae	*Clupea pallasii^**	1	1	1	1	1	1
Actinopteri	Gadiformes	Gadidae	*Gadus* sp.	1	1	1	1	1	1
Actinopteri	Gadiformes	Macrouridae		1	0	0	1	0	0
Actinopteri	Gadiformes	Merlucciidae	*Merluccius productus**	0	1	0	1	0	0
Actinopteri	Gobiiformes	Gobiidae	*Rhinogobiops nicholsii*	1	1	1	1	1	1
Actinopteri	Myctophiformes	Myctophidae	*Diaphus theta*	0	1	0	1	1	1
Actinopteri	Myctophiformes	Myctophidae	*Lampanyctus* sp.	0	0	0	1	1	0
Actinopteri	Myctophiformes	Myctophidae	*Stenobrachius leucopsarus**	1	1	1	1	1	1
Actinopteri	Myctophiformes	Myctophidae	*Stenobrachius* sp.	1	1	1	1	1	1
Actinopteri	Myctophiformes	Myctophidae	*Tarletonbeania crenularis*	1	0	1	1	1	1
Actinopteri	Osmeriformes	Osmeridae	*Hypomesus pretiosus**	1	1	1	1	1	1
Actinopteri	Osmeriformes	Osmeridae	*Mallotus villosus**	1	0	0	0	1	0
Actinopteri	Osmeriformes	Osmeridae	*Thaleichthys pacificus**	1	1	1	0	1	1
Actinopteri	Osmeriformes	Osmeridae		1	1	1	1	1	1
Actinopteri	Perciformes	Agonidae	*Agonopsis vulsa*	0	1	0	0	0	0
Actinopteri	Perciformes	Agonidae	*Blepsias cirrhosus*	0	1	1	1	1	0
Actinopteri	Perciformes	Agonidae	*Nautichthys oculofasciatus*	0	0	0	0	0	1
Actinopteri	Perciformes	Agonidae	*Xeneretmus leiops*	1	0	1	0	0	0
Actinopteri	Perciformes	Agonidae		1	1	1	1	1	1
Actinopteri	Perciformes	Anarhichadidae	*Anarrhichthys ocellatus**	0	0	1	0	0	0
Actinopteri	Perciformes	Anoplopomatidae	*Anoplopoma fimbria**	0	1	1	1	1	1
Actinopteri	Perciformes	Aulorhynchidae	*Aulorhynchus flavidus*	1	1	1	1	1	1
Actinopteri	Perciformes	Bathymasteridae	*Bathymaster signatus*	1	0	0	1	0	0
Actinopteri	Perciformes	Bathymasteridae	*Ronquilus jordani*	0	1	1	1	0	1
Actinopteri	Perciformes	Cottidae	*Artedius fenestralis*	0	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Artedius harringtoni*	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Artedius lateralis*	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Artedius* sp.	0	0	1	1	0	1
Actinopteri	Perciformes	Cottidae	*Ascelichthys rhodorus*	1	1	0	1	1	0
Actinopteri	Perciformes	Cottidae	*Chitonotus pugetensis*	0	0	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Clinocottus embryum*	0	0	1	1	1	0
Actinopteri	Perciformes	Cottidae	*Clinocottus globiceps*	0	0	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Clinocottus* sp.	0	0	1	0	0	0
Actinopteri	Perciformes	Cottidae	*Cottus* sp.	1	0	0	1	0	1
Actinopteri	Perciformes	Cottidae	*Enophrys bison*	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Hemilepidotus gilberti*	1	0	0	1	0	0
Actinopteri	Perciformes	Cottidae	*Hemilepidotus hemilepidotus*	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Hemilepidotus* sp.	1	0	1	0	1	0
Actinopteri	Perciformes	Cottidae	*Icelinus burchami*	0	1	0	1	0	1
Actinopteri	Perciformes	Cottidae	*Icelinus filamentosus*	1	0	0	0	1	0
Actinopteri	Perciformes	Cottidae	*Icelinus* sp.	1	1	1	1	1	1

				Site Codes					
Class	**Order**	**Family**	**Species**	**GI1**	**GI2**	**GI3**	**GO1**	**GO2**	**GO3**
Actinopteri	Perciformes	Cottidae	*Leptocottus armatus*	1	0	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Myoxocephalus* sp.	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Oligocottus maculosus*	1	0	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Oligocottus snyderi*	0	0	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Oligocottus* sp.	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Scorpaenichthys marmoratus*	1	1	1	0	1	1
Actinopteri	Perciformes	Cottidae	*Synchirus gilli*	0	0	1	0	0	0
Actinopteri	Perciformes	Cottidae	*Triglops pingelii*	0	0	1	0	1	0
Actinopteri	Perciformes	Cottidae		1	0	1	1	1	1
Actinopteri	Perciformes	Gasterosteidae	*Gasterosteus aculeatus*	1	0	1	1	1	1
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos decagrammus*	1	1	1	1	1	1
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos* sp.	1	1	1	0	0	1
Actinopteri	Perciformes	Hexagrammidae	*Ophiodon elongatus^**	1	1	0	1	1	1
Actinopteri	Perciformes	Jordaniidae	*Jordania zonope*	0	1	1	1	1	1
Actinopteri	Perciformes	Liparidae	*Liparis florae*	0	0	1	1	0	0
Actinopteri	Perciformes	Liparidae	*Liparis* sp.	1	0	0	0	0	0
Actinopteri	Perciformes	Pholidae	*Apodichthys flavidus*	0	0	1	1	1	0
Actinopteri	Perciformes	Pholidae	*Pholis laeta*	0	0	1	1	0	1
Actinopteri	Perciformes	Pholidae	*Pholis* sp.	1	1	1	1	1	1
Actinopteri	Perciformes	Psychrolutidae		0	0	1	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes caurinus^**	0	0	0	0	1	0
Actinopteri	Perciformes	Sebastidae	*Sebastes elongatus^**	1	1	0	1	1	1
Actinopteri	Perciformes	Sebastidae	*Sebastes entomelas^**	1	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes serranoides^*	0	0	1	1	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes* sp.^	1	1	1	1	1	1
Actinopteri	Perciformes	Sebastidae	*Sebastolobus* sp.	1	0	1	1	1	1
Actinopteri	Perciformes	Sebastidae		1	1	1	1	1	0
Actinopteri	Perciformes	Stichaeidae	*Alectrias alectrolophus*	1	1	1	1	0	1
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus insignis*	1	0	0	1	0	0
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus purpurescens*	0	0	0	1	0	0
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus* sp.	1	1	1	1	1	1
Actinopteri	Perciformes	Stichaeidae	*Chirolophis* sp.	1	0	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Phytichthys chirus*	0	0	0	1	0	0
Actinopteri	Perciformes	Stichaeidae	*Poroclinus rothrocki*	1	0	1	1	0	0
Actinopteri	Perciformes	Stichaeidae	*Stichaeus punctatus*	0	0	0	1	0	0
Actinopteri	Perciformes	Stichaeidae	*Xiphister atropurpureus*	0	0	1	1	0	1
Actinopteri	Perciformes	Stichaeidae	*Xiphister* sp.	0	0	1	1	1	1
Actinopteri	Perciformes	Stichaeidae		1	1	1	1	1	1
Actinopteri	Perciformes	Zoarcidae	*Lycodes cortezianus*	0	0	0	0	0	1
Actinopteri	Perciformes	Zoarcidae		0	0	0	0	0	1
Actinopteri	Perciformes			1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Cyclopsettidae	*Citharichthys sordidus*	1	0	0	1	0	0
Actinopteri	Pleuronectiformes	Cyclopsettidae	*Citharichthys* sp.	0	0	0	0	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Atheresthes stomias**	1	0	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Glyptocephalus zachirus**	1	0	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Hippoglossoides elassodon*	0	0	0	1	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lepidopsetta* sp.	0	0	1	1	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Limanda aspera*	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lyopsetta exilis*	1	0	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Microstomus bathybius*	0	0	1	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Microstomus pacificus**	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Myzopsetta proboscidea*	0	0	0	0	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Pleuronichthys coenosus*	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Pleuronichthys decurrens*	0	1	1	1	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae		1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus clarkii**	0	0	1	1	0	0
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha^**	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus keta^**	1	0	1	1	1	1

				Site Codes					
Class	**Order**	**Family**	**Species**	**GI1**	**GI2**	**GI3**	**GO1**	**GO2**	**GO3**
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus kisutch^**	0	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus mykiss**	0	0	1	0	0	0
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus nerka^**	0	1	1	1	0	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha^**	0	1	1	1	0	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus* sp.	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Salvelinus* sp.	1	0	0	1	0	1
Actinopteri	Salmoniformes	Salmonidae		0	0	1	1	0	1
Actinopteri	Scombriformes	Bramidae	*Brama japonica*	0	1	0	1	0	0
Actinopteri	Scombriformes	Icosteidae	*Icosteus aenigmaticus*	0	1	0	1	0	0
Actinopteri	Stomiiformes	Gonostomatidae	*Cyclothone atraria*	1	0	1	1	1	1
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes hexapterus^**	0	0	0	0	0	1
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes personatus*	1	0	1	1	1	1
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes* sp.	1	1	1	1	1	1
Actinopteri		Embiotocidae	*Cymatogaster aggregata**	1	1	1	1	1	1
Actinopteri		Embiotocidae		1	1	1	1	1	1
Chondrichthyes	Chimaeriformes	Chimaeridae	*Hydrolagus colliei*	1	1	1	1	1	1
Chondrichthyes	Lamniformes	Alopiidae	*Lamna ditropis**	1	0	0	0	1	1
Chondrichthyes	Rajiformes	Arhynchobatidae	*Bathyraja* sp.	1	1	1	1	0	1
Chondrichthyes	Rajiformes	Rajidae	*Amblyraja* sp.	0	0	0	0	1	0
Chondrichthyes	Rajiformes	Rajidae	*BeringRaja binoculata**	1	0	0	0	0	1

Appendix 6. Fish and Invertebrate Taxa Detected in Ship-based eDNA Samples in the Kitkatla Inlet Network Zones.

Due to the large number of sites sampled during the 2024-042 survey, data for fish and invertebrate taxa are displayed in a series of tables. Site codes are followed by a “B” or “S” to indicate samples collected from the bottom of the water column (B) or near the surface (S).

*Table 6A. Fish taxa detected in ship-based sampling sites 1-13, as detected by 12s and 16s markers. * ECPs for the Great Bear Sea MPA network in the NSB. ^ ecological or cultural COs for the Kitkatla Inlet Network Zones.*

				Site Code																				
Class	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Actinopteri	Argentiniformes	Bathylagidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1
Actinopteri	Argentiniformes	Microstomatidae	*Nansenia* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Actinopteri	Aulopiformes	Paralepididae	*Magnisudis atlantica*	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	1	1	1	0	1	1
Actinopteri	Batrachoidiformes	Batrachoididae	*Porichthys notatus*	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0
Actinopteri	Beloniformes	Belonidae	*Cololabis saira*	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Actinopteri	Beryciformes	Melamphaidae	*Poromitra crassiceps*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
Actinopteri	Beryciformes	Melamphaidae		0	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0
Actinopteri	Blenniiformes	Gobiesocidae	*Gobiesox maeandricus*	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1
Actinopteri	Carangiformes	Carangidae	*Trachurus symmetricus*	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0
Actinopteri	Clupeiformes	Clupeidae	*Clupea pallasii^**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Gadiformes	Gadidae	*Gadus chalcogrammus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Actinopteri	Gadiformes	Gadidae	*Gadus* sp.	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
Actinopteri	Gadiformes	Gadidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Actinopteri	Gadiformes	Macrouridae		0	1	0	1	0	0	1	1	1	1	1	0	1	0	0	1	1	1	0	1	1
Actinopteri	Gadiformes	Merlucciidae	*Merluccius productus**	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1	0	0	1
Actinopteri	Gadiformes			0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Gobiiformes	Gobiidae	*Lepidogobius lepidus*	0	0	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Actinopteri	Gobiiformes	Gobiidae	*Rhinogobiops nicholsii*	1	1	1	0	1	1	1	1	1	1	1	0	1	0	0	1	1	1	1	1	1
Actinopteri	Myctophiformes	Myctophidae	*Diaphus theta*	1	0	0	0	0	1	0	1	0	0	1	1	0	0	1	1	1	0	0	1	0
Actinopteri	Myctophiformes	Myctophidae	*Lampanyctus* sp.	1	0	0	0	1	1	0	1	1	0	0	1	0	0	1	1	1	0	1	0	1
Actinopteri	Myctophiformes	Myctophidae	*Stenobrachius leucopsarus**	0	0	0	1	0	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1
Actinopteri	Myctophiformes	Myctophidae	*Stenobrachius* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Actinopteri	Myctophiformes	Myctophidae	*Tarletonbeania crenularis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1
Actinopteri	Osmeriformes	Osmeridae	*Hypomesus pretiosus**	0	0	0	1	0	0	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1
Actinopteri	Osmeriformes	Osmeridae	*Mallotus villosus**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Actinopteri	Osmeriformes	Osmeridae	*Thaleichthys pacificus**	0	1	1	1	0	1	1	0	1	0	0	1	1	0	1	0	0	0	1	1	1
Actinopteri	Osmeriformes	Osmeridae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1

				Site Code																				
Class	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Actinopteri	Perciformes	Agonidae	*Blepsias cirrhosus*	1	0	0	1	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	1
Actinopteri	Perciformes	Agonidae	*Nautichthys oculofasciatus*	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0
Actinopteri	Perciformes	Agonidae	*Odontopyxis trispinosa*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Agonidae	*Xeneretmus leiops*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Actinopteri	Perciformes	Agonidae		0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	1	0	1	1	1	1
Actinopteri	Perciformes	Anarhichadidae	*Anarrhichthys ocellatus**	1	0	0	1	1	0	0	1	1	0	1	0	0	0	0	1	1	1	0	1	1
Actinopteri	Perciformes	Anoplopomatidae	*Anoplopoma fimbria**	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	1	1	1
Actinopteri	Perciformes	Aulorhynchidae	*Aulorhynchus flavidus*	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	1	1	1	1	1	1
Actinopteri	Perciformes	Bathymasteridae	*Bathymaster signatus*	1	0	0	1	1	0	1	1	1	0	1	0	1	0	0	1	1	1	0	1	1
Actinopteri	Perciformes	Bathymasteridae	*Ronquilus jordani*	1	0	0	0	1	0	0	1	0	1	1	0	1	0	0	1	1	1	1	1	1
Actinopteri	Perciformes	Bathymasteridae		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
Actinopteri	Perciformes	Cottidae	*Artedius fenestralis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Actinopteri	Perciformes	Cottidae	*Artedius harringtoni*	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	0	1	1
Actinopteri	Perciformes	Cottidae	*Artedius lateralis*	0	1	0	0	1	0	0	1	1	0	0	0	0	0	0	1	1	1	0	1	1
Actinopteri	Perciformes	Cottidae	*Artedius* sp.	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1
Actinopteri	Perciformes	Cottidae	*Ascelichthys rhodorus*	0	1	1	1	1	0	0	1	1	0	1	0	0	0	0	1	1	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Asemichthys taylori*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Chitonotus pugetensis*	1	0	0	0	0	1	0	1	1	1	1	1	1	0	0	1	0	0	0	1	1
Actinopteri	Perciformes	Cottidae	*Clinocottus acuticeps*	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Clinocottus embryum*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Clinocottus globiceps*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Clinocottus* sp.	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Cottus aleuticus*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Cottus* sp.	1	1	1	0	1	1	1	1	1	1	1	0	1	0	0	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Enophrys bison*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Hemilepidotus gilberti*	1	0	0	0	1	0	1	1	1	0	1	0	1	1	0	1	1	1	0	0	0
Actinopteri	Perciformes	Cottidae	*Hemilepidotus hemilepidotus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1
Actinopteri	Perciformes	Cottidae	*Hemilepidotus spinosus*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Hemilepidotus* sp.	1	0	0	0	1	0	0	1	1	1	0	0	1	0	0	1	1	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Icelinus borealis*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Icelinus burchami*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0
Actinopteri	Perciformes	Cottidae	*Icelinus* sp.	1	0	0	0	0	0	1	1	0	1	1	0	0	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Icelus spiniger*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Icelus* sp.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Leptocottus armatus*	1	1	1	1	1	0	0	1	1	1	1	0	1	0	0	1	1	0	0	1	1
Actinopteri	Perciformes	Cottidae	*Myoxocephalus*	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1

				Site Code																				
Class	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
			polyacanthocephalus																					
Actinopteri	Perciformes	Cottidae	*Myoxocephalus stelleri*	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Myoxocephalus* sp.	1	1	0	0	1	0	0	1	1	1	1	0	1	0	0	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Oligocottus maculosus*	1	1	1	0	1	1	1	1	1	1	1	0	1	0	0	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Oligocottus snyderi*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Oligocottus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Radulinus asprellus*	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Radulinus boleoides*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Radulinus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Ruscarius meanyi*	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Scorpaenichthys marmoratus*	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0
Actinopteri	Perciformes	Cottidae	*Synchirus gilli*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Triglops pingelii*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0
Actinopteri	Perciformes	Cottidae	*Triglops* sp.	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
Actinopteri	Perciformes	Cottidae		1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	0	1	1
Actinopteri	Perciformes	Cryptacanthodidae	*Cryptacanthodes bergi*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
Actinopteri	Perciformes	Cryptacanthodidae	*Cryptacanthodes giganteus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Actinopteri	Perciformes	Cryptacanthodidae	*Cryptacanthodes* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Actinopteri	Perciformes	Gasterosteidae	*Gasterosteus aculeatus*	1	1	1	0	1	0	1	1	1	1	1	0	0	1	0	1	1	0	1	1	1
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos decagrammus*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos lagocephalus*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos stelleri*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos* sp.	1	1	0	0	1	0	0	1	1	0	0	0	0	0	0	1	1	0	0	1	1
Actinopteri	Perciformes	Hexagrammidae	*Ophiodon elongatus^**	1	0	1	0	1	0	1	1	1	0	0	0	1	0	0	1	1	1	0	1	1
Actinopteri	Perciformes	Hexagrammidae	*Oxylebius pictus*	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Jordaniidae	*Jordania zonope*	1	1	0	1	1	0	0	1	0	1	0	0	0	0	0	1	1	1	0	1	1
Actinopteri	Perciformes	Liparidae	*Liparis florae*	0	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	1	0	0	0	0
Actinopteri	Perciformes	Liparidae	*Liparis fucensis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
Actinopteri	Perciformes	Liparidae	*Liparis* sp.	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0
Actinopteri	Perciformes	Liparidae	*Polypera greeni*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1
Actinopteri	Perciformes	Pholidae	*Apodichthys flavidus*	1	1	1	1	1	0	1	1	1	1	1	0	0	0	0	1	1	0	1	1	1
Actinopteri	Perciformes	Pholidae	*Apodichthys fucorum*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
Actinopteri	Perciformes	Pholidae	*Pholis laeta*	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0
Actinopteri	Perciformes	Pholidae	*Pholis* sp.	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	1	1	1	1	1	1
Actinopteri	Perciformes	Psychrolutidae	*Psychrolutes paradoxus*	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Psychrolutidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Actinopteri	Perciformes	Sebastidae	*Sebastes aurora^*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

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Class	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Actinopteri	Perciformes	Sebastidae	*Sebastes caurinus^**	1	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	1	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes crameri^**	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes diploproa^*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1
Actinopteri	Perciformes	Sebastidae	*Sebastes elongatus^**	0	0	0	0	0	1	1	0	0	0	0	1	1	1	0	0	0	1	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes entomelas^**	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	1	0	1	1	1	1
Actinopteri	Perciformes	Sebastidae	*Sebastes flavidus^**	1	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	0	0	0	1	0
Actinopteri	Perciformes	Sebastidae	*Sebastes jordani^*	1	0	0	0	1	0	0	1	1	0	0	0	0	1	0	1	1	1	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes maliger^**	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	1	1	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes melanops^**	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes melanostomus^*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes miniatus^**	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes mystinus^*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
Actinopteri	Perciformes	Sebastidae	*Sebastes nebulosus^**	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes paucispinis^**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Actinopteri	Perciformes	Sebastidae	*Sebastes pinniger^**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Actinopteri	Perciformes	Sebastidae	*Sebastes rosaceus^*	0	0	0	0	0	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1
Actinopteri	Perciformes	Sebastidae	*Sebastes Saxicola^*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes serranoides^*	1	1	0	1	1	0	0	1	1	0	0	1	1	0	0	1	0	1	1	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes variegatus^*	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes wilsoni^*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes* sp.^	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Sebastidae	*Sebastolobus* sp.	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	0	0	1	1	0	0
Actinopteri	Perciformes	Sebastidae		0	0	0	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1
Actinopteri	Perciformes	Stichaeidae	*Alectrias alectrolophus*	1	0	0	1	0	0	0	1	1	1	1	0	0	0	1	1	1	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus insignis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus purpurescens*	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	1	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus* sp.	1	0	0	1	0	0	0	1	1	1	1	0	1	0	1	1	1	1	1	1	1
Actinopteri	Perciformes	Stichaeidae	*Chirolophis decoratus*	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Chirolophis japonicus*	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Chirolophis* sp.	0	0	0	0	1	0	0	1	1	0	1	1	1	0	0	0	1	0	1	1	0
Actinopteri	Perciformes	Stichaeidae	*Lumpenella longirostris*	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Actinopteri	Perciformes	Stichaeidae	*Lumpenus sagitta*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Actinopteri	Perciformes	Stichaeidae	*Phytichthys chirus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Poroclinus rothrocki*	0	0	0	0	0	1	1	0	0	1	0	0	1	1	0	0	0	1	1	1	0
Actinopteri	Perciformes	Stichaeidae	*Stichaeus punctatus*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Xiphister atropurpureus*	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1
Actinopteri	Perciformes	Stichaeidae	*Xiphister* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1

				Site Code																				
Class	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Actinopteri	Perciformes	Stichaeidae		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Zaproridae	*Zaprora silenus*	1	0	0	1	0	0	0	1	1	0	1	0	0	0	0	1	1	0	0	0	1
Actinopteri	Perciformes	Zoarcidae	*Lycodes cortezianus*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Actinopteri	Perciformes	Zoarcidae	*Lycodes pacificus*	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1	1
Actinopteri	Perciformes	Zoarcidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Actinopteri	Perciformes			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Cyclopsettidae	*Citharichthys sordidus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Actinopteri	Pleuronectiformes	Cyclopsettidae	*Citharichthys* sp.	1	0	1	0	0	1	0	0	1	0	0	1	0	0	0	1	1	0	0	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Atheresthes stomias**	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Glyptocephalus zachirus**	0	0	0	0	0	1	1	0	1	1	1	0	1	1	0	0	1	1	1	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Hippoglossoides elassodon*	0	0	0	0	0	1	1	0	0	1	0	1	1	0	0	0	0	1	1	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Hippoglossus stenolepis^*	1	0	1	0	0	0	1	1	1	1	1	0	1	0	0	1	1	0	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Isopsetta isolepis*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lepidopsetta bilineata**	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lepidopsetta polyxystra*	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lepidopsetta* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Limanda aspera*	1	0	1	0	0	0	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lyopsetta exilis*	0	0	0	0	0	1	1	1	1	0	0	1	0	0	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Microstomus pacificus**	1	0	0	0	0	0	1	0	1	0	1	1	1	0	0	0	0	1	0	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Parophrys vetulus*	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Platichthys stellatus*	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Pleuronichthys coenosus*	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Pleuronichthys decurrens*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Pleuronichthys* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Psettichthys melanostictus*	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae		1	1	1	1	1	0	1	1	1	1	1	0	1	0	0	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus clarkii**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha^**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus keta^**	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus kisutch^**	0	0	1	0	1	0	0	0	1	0	0	0	1	0	0	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus mykiss**	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus nerka^**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha*	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	1	1	0	0	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus* sp.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Salvelinus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Actinopteri	Salmoniformes	Salmonidae		0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Actinopteri	Scombriformes	Bramidae	*Brama japonica*	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0

				Site Code																				
Class	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Actinopteri	Scombriformes	Icosteidae	*Icosteus aenigmaticus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	1
Actinopteri	Stomiiformes	Gonostomatidae	*Cyclothone atraria*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Actinopteri	Stomiiformes	Stomiidae	*Tactostoma macropus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1
Actinopteri	Syngnathiformes	Syngnathidae	*Syngnathus californiensis*	0	1	0	1	0	0	0	1	1	0	1	0	0	0	0	0	1	0	0	0	1
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes hexapterus*	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	1	0	0	0	0
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes personatus*	1	1	1	1	1	0	0	1	1	1	1	0	0	1	0	1	1	0	1	1	1
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes* sp.	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	1	1	1	1	1	1
Actinopteri	Uranoscopiformes	Ammodytidae		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
Actinopteri		Embiotocidae	*Brachyistius frenatus*	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Actinopteri		Embiotocidae	*Cymatogaster aggregata*	0	0	0	1	1	0	0	1	1	1	1	0	0	1	0	1	1	1	1	1	1
Actinopteri		Embiotocidae	*Embiotoca lateralis*	0	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0
Actinopteri		Embiotocidae	*Hyperprosopon anale*	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0
Actinopteri		Embiotocidae		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chondrichthyes	Chimaeriformes	Chimaeridae	*Hydrolagus colliei*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chondrichthyes	Lamniformes	Alopiidae	*Lamna ditropis**	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Chondrichthyes	Rajiformes	Arhynchobatidae	*Bathyraja interrupta**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Chondrichthyes	Rajiformes	Arhynchobatidae	*Bathyraja* sp.	0	0	0	0	0	1	1	0	0	0	0	0	1	1	1	0	0	1	0	0	0
Chondrichthyes	Rajiformes	Rajidae	*Amblyraja* sp.	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Chondrichthyes	Rajiformes	Rajidae	*BeringRaja binoculata**	1	0	0	0	1	1	0	1	1	0	1	0	1	0	0	1	1	0	0	1	1
Chondrichthyes	Rajiformes	Rajidae	*Dipturus laevis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Chondrichthyes	Rajiformes	Rajidae	*Dipturus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Chondrichthyes	Squaliformes	Squalidae	*Squalus suckleyi**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0

*Table 6B. Fish taxa detected in ship-based sampling sites 14-25, as detected by 12s and 16s markers. * ECPs for the Great Bear Sea MPA network in the NSB. ^ ecological or cultural COs for the Kitkatla Inlet Network Zones.*

				Site Code																				
Class	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20S**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Actinopteri	Argentiniformes	Bathylagidae		1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Argentiniformes	Microstomatidae	*Nansenia* sp.	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Actinopteri	Aulopiformes	Paralepididae	*Magnisudis atlantica*	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Actinopteri	Batrachoidiformes	Batrachoididae	*Porichthys notatus*	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Actinopteri	Beloniformes	Belonidae	*Cololabis saira*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Beryciformes	Melamphaidae	*Poromitra crassiceps*	1	1	1	1	1	1	1	1	z1	1	1	1	1	1	1	1	1	1	1	1	1

				Site Code																					
Class	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20S**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Actinopteri	Beryciformes	Melamphaidae		0	1	1	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0
Actinopteri	Blenniiformes	Gobiesocidae	*Gobiesox maeandricus*	1	1	1	0	1	1	1	1	0	1	0	1	0	1	1	0	1	1	1	1	1
Actinopteri	Carangiformes	Carangidae	*Trachurus symmetricus*	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0
Actinopteri	Clupeiformes	Clupeidae	*Clupea pallasii^**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Gadiformes	Gadidae	*Gadus macrocephalus**	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Gadiformes	Gadidae	*Gadus* sp.	1	1	1	1	0	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Gadiformes	Gadidae		0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
Actinopteri	Gadiformes	Macrouridae		1	1	0	0	1	0	0	1	1	1	0	1	0	1	1	0	1	0	1	0	0
Actinopteri	Gadiformes	Merlucciidae	*Merluccius productus**	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0
Actinopteri	Gadiformes	Moridae	*Antimora microlepis*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Gadiformes			0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Actinopteri	Gobiiformes	Gobiidae	*Lepidogobius lepidus*	1	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0
Actinopteri	Gobiiformes	Gobiidae	*Rhinogobiops nicholsii*	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Actinopteri	Myctophiformes	Myctophidae	*Diaphus theta*	0	0	0	1	1	1	0	0	1	0	0	0	0	0	1	0	0	1	1	1	0
Actinopteri	Myctophiformes	Myctophidae	*Lampanyctus regalis*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Actinopteri	Myctophiformes	Myctophidae	*Lampanyctus* sp.	0	1	0	1	0	1	1	1	1	0	0	1	0	1	1	0	0	0	0	1	0
Actinopteri	Myctophiformes	Myctophidae	*Stenobrachius leucopsarus**	0	1	1	1	0	1	1	1	1	1	0	1	0	1	1	0	1	0	1	1	1
Actinopteri	Myctophiformes	Myctophidae	*Stenobrachius* sp.	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1
Actinopteri	Myctophiformes	Myctophidae	*Tarletonbeania crenularis*	0	1	0	0	1	0	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0
Actinopteri	Osmeriformes	Osmeridae	*Hypomesus pretiosus**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
Actinopteri	Osmeriformes	Osmeridae	*Mallotus villosus**	1	0	0	1	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Actinopteri	Osmeriformes	Osmeridae	*Thaleichthys pacificus**	0	0	1	1	0	1	1	1	1	0	0	0	0	0	1	1	1	0	1	0	0
Actinopteri	Osmeriformes	Osmeridae		1	0	0	0	1	1	1	1	1	0	1	0	1	1	1	1	1	0	1	1	0
Actinopteri	Perciformes	Agonidae	*Agonopsis vulsa*	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0
Actinopteri	Perciformes	Agonidae	*Blepsias bilobus*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
Actinopteri	Perciformes	Agonidae	*Blepsias cirrhosus*	0	1	0	0	1	1	0	0	1	0	0	0	1	1	1	0	1	0	0	0	0
Actinopteri	Perciformes	Agonidae	*Nautichthys oculofasciatus*	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	0	0	0	1	0
Actinopteri	Perciformes	Agonidae	*Odontopyxis trispinosa*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Agonidae	*Xeneretmus leiops*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Agonidae		1	0	1	0	1	1	0	0	1	0	1	0	1	1	1	0	1	0	0	0	0
Actinopteri	Perciformes	Anarhichadidae	*Anarrhichthys ocellatus**	1	1	0	0	1	1	1	1	1	0	0	1	1	1	1	0	1	0	0	1	1
Actinopteri	Perciformes	Anoplopomatidae	*Anoplopoma fimbria**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1
Actinopteri	Perciformes	Aulorhynchidae	*Aulorhynchus flavidus*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Bathymasteridae	*Bathymaster signatus*	1	0	1	1	1	0	0	1	1	0	0	0	1	0	1	0	0	0	1	1	1
Actinopteri	Perciformes	Bathymasteridae	*Ronquilus jordani*	1	0	0	1	1	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1
Actinopteri	Perciformes	Bathymasteridae		0	0	1	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0
Actinopteri	Perciformes	Cottidae	*Artedius fenestralis*	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1

				Site Code																				
Class	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20S**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Actinopteri	Perciformes	Cottidae	*Artedius harringtoni*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Artedius lateralis*	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0
Actinopteri	Perciformes	Cottidae	*Artedius* sp.	0	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1	0	0	0	1	0
Actinopteri	Perciformes	Cottidae	*Ascelichthys rhodorus*	1	1	0	1	1	0	0	1	1	0	1	0	1	1	1	1	0	0	0	1	1
Actinopteri	Perciformes	Cottidae	*Chitonotus pugetensis*	0	0	0	1	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Clinocottus acuticeps*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Clinocottus embryum*	0	1	1	0	0	0	0	0	1	0	1	0	0	1	1	0	1	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Cottus aleuticus*	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Cottus asper*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Cottus* sp.	0	0	1	0	1	1	0	1	1	0	1	1	1	1	1	1	0	1	1	1	0
Actinopteri	Perciformes	Cottidae	*Enophrys bison*	1	1	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Hemilepidotus gilberti*	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0
Actinopteri	Perciformes	Cottidae	*Hemilepidotus hemilepidotus*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Hemilepidotus* sp.	1	0	0	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	0
Actinopteri	Perciformes	Cottidae	*Icelinus borealis*	0	1	0	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	1	0	0
Actinopteri	Perciformes	Cottidae	*Icelinus burchami*	0	0	0	0	1	0	0	1	1	0	1	1	0	0	0	1	0	1	0	0	0
Actinopteri	Perciformes	Cottidae	*Icelinus* sp.	1	1	1	1	1	1	0	0	1	1	0	1	0	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Icelus spiniger*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Actinopteri	Perciformes	Cottidae	*Leptocottus armatus*	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Myoxocephalus polyacanthocephalus*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Actinopteri	Perciformes	Cottidae	*Myoxocephalus stelleri*	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Myoxocephalus* sp.	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0
Actinopteri	Perciformes	Cottidae	*Oligocottus maculosus*	1	0	0	1	1	0	0	0	1	0	0	1	1	1	1	0	0	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Oligocottus snyderi*	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1
Actinopteri	Perciformes	Cottidae	*Oligocottus* sp.	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Cottidae	*Paracottus knerii*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Radulinus* sp.	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Cottidae	*Scorpaenichthys marmoratus*	1	0	0	0	0	1	0	1	0	1	1	1	1	1	0	1	0	1	0	1	0
Actinopteri	Perciformes	Cottidae	*Synchirus gilli*	1	0	0	1	1	0	1	1	0	1	0	1	0	1	0	1	0	1	0	1	0
Actinopteri	Perciformes	Cottidae	*Triglops pingelii*	1	1	1	1	1	0	1	1	0	1	1	1	1	1	0	0	1	1	1	1	0
Actinopteri	Perciformes	Cottidae	*Triglops* sp.	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	1	0
Actinopteri	Perciformes	Cottidae		1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1
Actinopteri	Perciformes	Cryptacanthodidae	*Cryptacanthodes bergi*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Cryptacanthodidae	*Cryptacanthodes giganteus*	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Actinopteri	Perciformes	Cryptacanthodidae	*Cryptacanthodes* sp.	1	1	0	0	1	0	0	0	1	1	1	0	0	1	1	1	0	0	0	1	0
Actinopteri	Perciformes	Gasterosteidae	*Gasterosteus aculeatus*	1	1	1	0	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos decagrammus*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

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Class	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20S**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos lagocephalus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos stelleri*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Actinopteri	Perciformes	Hexagrammidae	*Hexagrammos* sp.	1	0	0	1	1	1	0	1	0	0	0	1	1	1	1	1	0	1	1	1	1
Actinopteri	Perciformes	Hexagrammidae	*Ophiodon elongatus^**	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Hexagrammidae	*Oxylebius pictus*	0	1	0	0	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0
Actinopteri	Perciformes	Jordaniidae	*Jordania zonope*	1	0	0	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	1	0
Actinopteri	Perciformes	Liparidae	*Liparis florae*	1	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	1	0
Actinopteri	Perciformes	Liparidae	*Liparis fucensis*	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
Actinopteri	Perciformes	Liparidae	*Liparis* sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	1	0
Actinopteri	Perciformes	Liparidae	*Polypera greeni*	0	0	1	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	1	0
Actinopteri	Perciformes	Pholidae	*Apodichthys flavidus*	1	1	0	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Pholidae	*Pholis laeta*	0	0	0	0	1	0	1	1	0	0	0	0	1	1	1	0	0	0	0	0	0
Actinopteri	Perciformes	Pholidae	*Pholis ornata*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Actinopteri	Perciformes	Pholidae	*Pholis* sp.	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Psychrolutidae		0	0	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	0	0	1	0
Actinopteri	Perciformes	Sebastidae	*Sebastes aurora^*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Actinopteri	Perciformes	Sebastidae	*Sebastes caurinus^**	1	0	1	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0
Actinopteri	Perciformes	Sebastidae	*Sebastes crameri^**	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes diploproa^*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes elongatus^**	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes entomelas^**	0	0	1	1	1	0	0	1	0	1	0	0	1	1	0	1	0	0	0	0	1
Actinopteri	Perciformes	Sebastidae	*Sebastes flavidus^**	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes jordani^*	1	0	1	0	1	0	0	0	1	0	0	0	0	1	1	0	0	0	1	1	0
Actinopteri	Perciformes	Sebastidae	*Sebastes maliger^**	0	0	1	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	1	0
Actinopteri	Perciformes	Sebastidae	*Sebastes miniatus^**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes mystinus^*	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes nebulosus^**	0	0	0	0	1	1	1	0	1	0	0	0	0	0	1	0	0	0	0	1	0
Actinopteri	Perciformes	Sebastidae	*Sebastes paucispinis^**	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes pinniger^**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes rosaceus^*	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes saxicola^*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Actinopteri	Perciformes	Sebastidae	*Sebastes serranoides^*	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes wilsoni^*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes zacentrus^*	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae	*Sebastes* sp.^	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Sebastidae	*Sebastolobus* sp.	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Sebastidae		1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	0

				Site Code																				
Class	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20S**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Actinopteri	Perciformes	Stichaeidae	*Alectrias alectrolophus*	1	0	0	0	1	0	0	1	0	0	0	0	1	1	1	0	0	1	1	1	0
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus insignis*	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus purpurescens*	1	1	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	0
Actinopteri	Perciformes	Stichaeidae	*Anoplarchus* sp.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Stichaeidae	*Chirolophis decoratus*	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Chirolophis* sp.	1	0	0	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0
Actinopteri	Perciformes	Stichaeidae	*Lumpenus sagitta*	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Lumpenus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Phytichthys chirus*	0	0	0	0	1	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	1
Actinopteri	Perciformes	Stichaeidae	*Plectobranchus evides*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Poroclinus rothrocki*	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Stichaeus punctatus*	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Actinopteri	Perciformes	Stichaeidae	*Xiphister atropurpureus*	1	1	0	1	1	0	1	0	1	0	0	1	1	1	1	1	1	0	1	1	1
Actinopteri	Perciformes	Stichaeidae	*Xiphister mucosus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Actinopteri	Perciformes	Stichaeidae	*Xiphister* sp.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Stichaeidae		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Perciformes	Zaproridae	*Zaprora silenus*	1	1	0	0	1	1	0	0	1	0	0	0	1	0	1	0	1	0	1	0	0
Actinopteri	Perciformes	Zoarcidae	*Lycodes brevipes*	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1
Actinopteri	Perciformes	Zoarcidae	*Lycodes cortezianus*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Actinopteri	Perciformes	Zoarcidae	*Lycodes pacificus*	0	1	0	0	0	1	0	1	0	1	0	0	1	0	1	0	1	1	1	1	0
Actinopteri	Perciformes	Zoarcidae	*Lycodes* sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Perciformes	Zoarcidae		1	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0
Actinopteri	Perciformes			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Cyclopsettidae	*Citharichthys sordidus*	1	1	0	1	1	0	0	1	1	1	1	1	0	0	0	1	0	0	0	0	1
Actinopteri	Pleuronectiformes	Cyclopsettidae	*Citharichthys stigmaeus*	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	1
Actinopteri	Pleuronectiformes	Cyclopsettidae	*Citharichthys* sp.	1	1	0	1	1	1	1	0	1	1	0	0	1	1	0	1	0	1	1	0	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Atheresthes stomias**	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Glyptocephalus zachirus**	0	1	1	1	1	1	1	0	1	0	0	1	1	1	0	1	0	0	1	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Hippoglossoides elassodon*	0	0	1	1	0	1	0	0	0	0	1	1	0	1	0	1	0	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Hippoglossus stenolepis^*	0	1	1	0	1	0	0	1	0	1	0	1	0	1	1	1	0	0	1	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Isopsetta isolepis*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lepidopsetta bilineata**	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lepidopsetta polyxystra*	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lepidopsetta* sp.	0	0	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Limanda aspera*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Lyopsetta exilis*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Microstomus pacificus**	0	0	1	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	1	0	0

				Site Code																				
Class	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20S**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Actinopteri	Pleuronectiformes	Pleuronectidae	*Myzopsetta proboscidea*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Parophrys vetulus*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Platichthys stellatus*	0	1	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	1	1	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Pleuronichthys coenosus*	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Pleuronichthys decurrens*	1	0	0	1	1	1	0	0	1	1	1	0	0	1	1	1	1	1	0	1	1
Actinopteri	Pleuronectiformes	Pleuronectidae	*Pleuronichthys* sp.	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Psettichthys melanostictus*	0	1	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	1	1	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae	*Reinhardtius hippoglossoides*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Pleuronectiformes	Pleuronectidae		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus clarkii**	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus gorbuscha^**	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	0	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus keta^**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus kisutch^**	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus mykiss**	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	0	0
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus nerka^**	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus tshawytscha^**	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Oncorhynchus* sp.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri	Salmoniformes	Salmonidae	*Salvelinus* sp.	0	1	0	0	0	0	1	1	0	1	0	0	1	0	0	0	1	0	1	0	1
Actinopteri	Salmoniformes	Salmonidae		0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1
Actinopteri	Scombriformes	Bramidae	*Brama japonica*	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri	Scombriformes	Icosteidae	*Icosteus aenigmaticus*	1	0	1	0	1	1	0	0	1	0	1	0	1	1	0	1	0	1	1	1	1
Actinopteri	Stomiiformes	Gonostomatidae	*Cyclothone atraria*	1	0	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	0	1
Actinopteri	Stomiiformes	Stomiidae	*Tactostoma macropus*	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	1	0
Actinopteri	Syngnathiformes	Syngnathidae	*Syngnathus californiensis*	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes hexapterus^**	0	0	0	0	1	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes personatus*	1	1	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1
Actinopteri	Uranoscopiformes	Ammodytidae	*Ammodytes* sp.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri		Embiotocidae	*Brachyistius frenatus*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Actinopteri		Embiotocidae	*Cymatogaster aggregata**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Actinopteri		Embiotocidae	*Embiotoca lateralis*	1	0	0	0	1	0	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0
Actinopteri		Embiotocidae	*Hyperprosopon anale*	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0
Actinopteri		Embiotocidae		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chondrichthyes	Chimaeriformes	Chimaeridae	*Hydrolagus colliei*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Chondrichthyes	Lamniformes	Alopiidae	*Lamna ditropis**	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Chondrichthyes	Rajiformes	Arhynchobatidae	*Bathyraja* sp.	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Chondrichthyes	Rajiformes	Rajidae	*BeringRaja binoculata**	0	0	0	1	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	0
Chondrichthyes	Rajiformes	Rajidae	*Dipturus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0

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Class	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20S**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Chondrichthyes	Squaliformes	Squalidae	*Squalus suckleyi**	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hyperoartia	Petromyzontiformes	Petromyzontidae	*Lampetra* sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*Table 6C. Invertebrate taxa detected in ship-based sampling sites 1-13, as detected by COI markers. Column "P" refers to the phylum. Phylum codes: An – Annelida, Ar – Arthropoda, Br – Brachiopoda, By – Bryozoa, Ch – Chaetognatha, Cd – Chordata, Cn – Cnidaria; Ct – Ctenophora, Ec – Echinodermata, Mo – Mollusca, Nt – Nematoda, Ne – Nemertea, Ph – Phoronida, Pl – Platyhelminthes, Po – Porifera, Pr – Priapulida. Due to the large number of sites, the information has been displayed in two tables. * ECPs for the Great Bear Sea MPA network in the NSB. ^ ecological or cultural COs for the Kitkatla Inlet Network Zones.*

					Site Code																					
P	**Class**	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
An	Clitellata	Crassiclitellata	Lumbricidae	*Eiseniella tetraedra*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Clitellata	Enchytraeida	Enchytraeidae		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Clitellata	Hirudinida	Erpobdellidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
An	Clitellata	Tubificida	Naididae	*Nais communis*	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
An	Clitellata	Tubificida	Naididae		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Echiuroidea	Thalassematidae	*Arhynchite pugettensis*	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0
An	Polychaeta	Eunicida	Dorvilleidae		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Eunicida	Eunicidae	*Leodice valens*	1	1	0	1	1	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1
An	Polychaeta	Eunicida	Lumbrineridae	*Lumbrineris* sp.	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0
An	Polychaeta	Eunicida	Lumbrineridae		0	0	0	0	1	1	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0
An	Polychaeta	Eunicida	Onuphidae	*Diopatra ornata*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0
An	Polychaeta	Eunicida	Onuphidae	*Diopatra* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0
An	Polychaeta	Phyllodocida	Glyceridae	*Glycera americana*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
An	Polychaeta	Phyllodocida	Glyceridae	*Glycera capitata*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
An	Polychaeta	Phyllodocida	Glyceridae	*Glycera nana*	1	0	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	0	0	1	0	0
An	Polychaeta	Phyllodocida	Glyceridae	*Glycera robusta*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Glyceridae	*Glycera* sp.	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0
An	Polychaeta	Phyllodocida	Goniadidae	*Glycinde armigera*	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Goniadidae	*Glycinde* sp.	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0
An	Polychaeta	Phyllodocida	Hesionidae	*Micropodarke dubia*	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0	1	1	1	1	0	1
An	Polychaeta	Phyllodocida	Hesionidae	*Neogyptis* sp.	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Nereididae	*Alitta* sp.	1	1	0	1	1	0	0	1	0	0	0	1	1	0	1	0	1	0	0	0	0	0
An	Polychaeta	Phyllodocida	Nereididae	*Micronereis nanaimoensis*	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Nereididae	*Nereis vexillosa*	1	0	0	0	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0

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P	Class	Order	Family	Species	1S	2B	2S	3B	4S	5B	5S	6B	6S	7B	7S	8B	8S	9B	9S	10B	11S	12B	12S	13B	13S
An	Polychaeta	Phyllodocida	Nereididae	*Platynereis bicanaliculata*	1	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0
An	Polychaeta	Phyllodocida	Nereididae	*Platynereis* sp.	1	1	1	1	1	0	0	1	1	1	1	1	0	1	1	1	1	0	1	0	1
An	Polychaeta	Phyllodocida	Pholoidae	*Pholoe baltica*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Pholoidae	*Pholoe* sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Pholoidae	*Pholoides asperus*	1	1	0	1	0	0	0	1	1	1	1	0	1	0	0	0	1	1	0	0	0
An	Polychaeta	Phyllodocida	Phyllodocidae	*Phyllodoce medipapillata*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Phyllodocidae	*Phyllodoce* sp.	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Phyllodocidae	*Pterocirrus montereyensis*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Phyllodocidae		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Polynoidae	*Arctonoe pulchra*	1	1	1	0	1	1	0	1	1	0	0	1	1	0	0	0	0	0	1	1	1
An	Polychaeta	Phyllodocida	Polynoidae	*Arctonoe vittata*	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Polynoidae	*Arctonoe* sp.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Polynoidae	*Halosydna brevisetosa*	1	1	1	0	1	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0
An	Polychaeta	Phyllodocida	Polynoidae	*Harmothoe imbricata*	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Polynoidae	*Harmothoe rarispina*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Polynoidae	*Harmothoe* sp.	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Polynoidae	*Lepidonotus* sp.	0	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Polynoidae	*Malmgreniella nigralba*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
An	Polychaeta	Phyllodocida	Polynoidae		1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0	1	0	0	1
An	Polychaeta	Phyllodocida	Sphaerodoridae		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Epigamia magna*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Exogone* sp.	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Myrianida irregularis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Odontosyllis phosphorea*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Pionosyllis* sp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Proceraea nigropunctata*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Syllis alternata*	1	0	1	0	1	1	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Syllis elongata*	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Syllis pigmentata*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Syllis* sp.	1	1	0	1	1	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae		1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	1	0	1	0	1
An	Polychaeta	Phyllodocida			1	1	1	1	1	1	0	0	1	1	0	1	1	1	1	1	1	0	1	1	1
An	Polychaeta	Sabellida	Oweniidae	*Galathowenia oculata*	0	0	0	0	1	1	1	0	1	0	0	1	1	0	0	1	1	1	0	0	1
An	Polychaeta	Sabellida	Oweniidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1
An	Polychaeta	Sabellida	Sabellariidae	*Neosabellaria cementarium*	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Sabellida	Sabellariidae		1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
An	Polychaeta	Sabellida	Sabellidae	*Chone aurantiaca*	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0

					Site Code																							
P	Class	Order	Family	Species	1S	2B	2S	3B	4S	5B	5S	6B	6S	7B	7S	8B	8S	9B	9S	10B	11S	12B	12S	13B	13S
An	Polychaeta	Sabellida	Sabellidae	*Chone* sp.	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0
An	Polychaeta	Sabellida	Sabellidae	*Eudistylia vancouveri*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1
An	Polychaeta	Sabellida	Sabellidae	*Megalomma splendida*	0	0	0	0	1	1	0	0	1	0	0	1	1	0	0	0	1	0	1	1	1
An	Polychaeta	Sabellida	Sabellidae	*Myxicola aesthetica*	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Sabellida	Sabellidae	*Myxicola infundibulum*	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Sabellida	Sabellidae	*Myxicola* sp.	0	1	1	1	1	1	1	1	1	0	1	0	0	0	0	0	1	1	1	0	0
An	Polychaeta	Sabellida	Sabellidae	*Schizobranchia insignis*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
An	Polychaeta	Sabellida	Sabellidae		1	0	0	0	0	0	0	1	1	1	0	0	0	1	0	1	1	0	1	0	0
An	Polychaeta	Spionida	Magelonidae	*Magelona* sp.	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
An	Polychaeta	Spionida	Spionidae	*Boccardia proboscidea*	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Laonice cirrata*	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Laonice* sp.	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Polydora onagawaensis*	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Polydora* sp.	1	0	0	1	0	0	0	1	1	1	0	1	0	1	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Prionospio multibranchiata*	0	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
An	Polychaeta	Spionida	Spionidae	*Prionospio steenstrupi*	0	0	1	0	0	1	0	0	0	1	1	1	0	1	0	0	0	1	0	0	0
An	Polychaeta	Spionida	Spionidae	*Prionospio* sp.	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Pseudopolydora bassarginensis*	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
An	Polychaeta	Spionida	Spionidae	*Pseudopolydora paucibranchiata*	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
An	Polychaeta	Spionida	Spionidae	*Pygospio elegans*	1	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Rhynchospio arenincola*	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Scolelepis squamata*	0	0	1	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Scolelepis* sp.	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Spiophanes hakaiensis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Spiophanes* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
An	Polychaeta	Terebellida	Ampharetidae	*Asabellides* sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Ampharetidae	*Phyllocomus hiltoni*	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Cirratulidae	*Cirratulus spectabilis*	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Cirratulidae	*Dodecaceria* sp.	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1
An	Polychaeta	Terebellida	Cirratulidae	*Tharyx* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
An	Polychaeta	Terebellida	Cirratulidae		1	0	0	1	1	0	1	1	1	1	1	0	0	0	0	1	1	0	0	0	1
An	Polychaeta	Terebellida	Melinnidae	*Melinna heterodonta*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
An	Polychaeta	Terebellida	Pectinariidae	*Pectinaria californiensis*	0	0	0	1	0	1	1	0	0	0	0	1	1	1	1	0	0	1	1	1	1
An	Polychaeta	Terebellida	Pectinariidae	*Pectinaria granulata*	0	1	1	1	1	1	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1
An	Polychaeta	Terebellida	Sternaspidae	*Sternaspis* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
An	Polychaeta	Terebellida	Terebellidae	*Amphitrite cirrata*	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0

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P	Class	Order	Family	Species	1S	2B	2S	3B	4S	5B	5S	6B	6S	7B	7S	8B	8S	9B	9S	10B	11S	12B	12S	13B	13S
An	Polychaeta	Terebellida	Terebellidae	*Eupolymnia heterobranchia*	1	1	0	1	1	0	1	1	1	1	1	0	1	0	0	1	1	0	0	1	1
An	Polychaeta	Terebellida	Terebellidae	*Lanice* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
An	Polychaeta	Terebellida	Terebellidae	*Neoamphitrite robusta*	0	1	1	0	1	1	1	1	1	0	0	1	1	0	0	1	1	0	0	0	0
An	Polychaeta	Terebellida	Terebellidae	*Neoamphitrite* sp.	0	1	0	0	1	0	1	1	1	0	0	0	1	0	0	1	1	0	0	0	0
An	Polychaeta	Terebellida	Terebellidae	*Nicolea* sp.	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	1	0	0
An	Polychaeta	Terebellida	Terebellidae	*Pista wui*	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1	0	0	1	0
An	Polychaeta	Terebellida	Terebellidae	*Polycirrus* sp.	1	1	1	1	1	0	0	1	1	0	0	0	1	0	0	1	1	0	0	0	0
An	Polychaeta	Terebellida	Terebellidae	*Thelepus cincinnatus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
An	Polychaeta	Terebellida	Terebellidae	*Thelepus* sp.	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	1	0	0
An	Polychaeta	Terebellida	Terebellidae		1	1	0	1	0	1	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0
An	Polychaeta	Terebellida	Trichobranchidae	*Terebellides* sp.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0
An	Polychaeta		Capitellidae	*Capitella* sp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
An	Polychaeta		Capitellidae	*Dasybranchus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
An	Polychaeta		Capitellidae	*Notomastus* sp.	0	1	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	1	1
An	Polychaeta		Capitellidae		1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta		Chaetopteridae	*Chaetopterus variopedatus*	0	0	0	1	0	0	0	0	0	1	0	1	1	1	0	0	1	0	1	1	0
An	Polychaeta		Chaetopteridae	*Mesochaetopterus taylori*	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
An	Polychaeta		Chaetopteridae	*Phyllochaetopterus prolifica*	1	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0
An	Polychaeta		Chaetopteridae	*Phyllochaetopterus* sp.	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0
An	Polychaeta		Maldanidae	*Axiothella rubrocincta*	1	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta		Maldanidae	*Maldanella harai*	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	1	0	0	0	0
An	Polychaeta		Maldanidae	*Praxillella affinis*	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	1	1
An	Polychaeta		Maldanidae		0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	1	0
An	Polychaeta		Opheliidae	*Armandia brevis*	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	0	1	1	1
An	Polychaeta		Opheliidae	*Ophelina acuminata*	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0
An	Polychaeta		Orbiniidae	*Leitoscoloplos pugettensis*	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0
An	Polychaeta		Orbiniidae	*Naineris dendritica*	0	1	0	1	1	0	0	1	1	0	0	0	1	0	0	1	1	0	0	0	0
An	Polychaeta		Orbiniidae	*Naineris* sp.	1	1	1	1	1	0	0	1	1	0	0	0	1	0	0	1	1	0	0	0	0
An	Polychaeta		Orbiniidae	*Scoloplos acmeceps*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta		Orbiniidae	*Scoloplos armiger*	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta		Orbiniidae		1	0	0	1	0	0	0	1	0	1	1	0	0	0	0	1	1	0	0	0	0
An	Polychaeta		Polygordiidae	*Polygordius* sp.	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
An	Polychaeta		Saccocirridae	*Saccocirrus* sp.	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta		Scalibregmatidae	*Scalibregma* sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta				1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
An	Sipuncula	Golfingiida	Themistidae	*Themiste pyroides*	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Sipuncula	Phascolosomatiformes	Phascolosomatidae	*Phascolosoma agassizii*	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	1	0	0	0	1	1

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P	**Class**	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Ar	Branchiopoda	Diplostraca	Podonidae	*Evadne nordmanni*	0	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	0
Ar	Branchiopoda	Diplostraca	Podonidae	*Evadne* sp.	0	1	1	1	0	1	0	1	1	1	1	0	1	1	1	1	1	0	1	0	0
Ar	Branchiopoda	Diplostraca	Podonidae	*Podon leuckartii*	0	0	0	1	1	0	0	1	1	1	1	0	0	0	1	1	1	0	0	0	1
Ar	Hexanauplia	Calanoida	Acartiidae	*Acartia longiremis*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Acartiidae	*Acartia* sp.	0	1	1	1	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1
Ar	Hexanauplia	Calanoida	Calanidae	*Calanus glacialis*	0	1	1	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	0	0	0
Ar	Hexanauplia	Calanoida	Calanidae	*Calanus marshallae*	0	1	1	1	0	0	1	0	0	0	0	1	1	0	1	1	0	0	1	1	1
Ar	Hexanauplia	Calanoida	Calanidae	*Calanus pacificus*	0	0	1	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	1	1
Ar	Hexanauplia	Calanoida	Calanidae	*Calanus* sp.	1	1	1	1	1	1	1	1	0	0	0	1	1	0	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Calanidae	*Ctenocalanus vanus*	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Ar	Hexanauplia	Calanoida	Calanidae		1	1	1	1	1	1	1	0	0	0	0	1	1	0	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Centropagidae	*Centropages abdominalis*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Clausocalanidae	*Clausocalanus parapergens*	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Calanoida	Clausocalanidae	*Microcalanus pygmaeus*	0	0	1	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	1	0	0
Ar	Hexanauplia	Calanoida	Clausocalanidae	*Pseudocalanus minutus*	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Clausocalanidae	*Pseudocalanus moultoni*	0	0	1	1	0	0	1	0	0	0	0	0	1	1	1	1	1	0	1	1	1
Ar	Hexanauplia	Calanoida	Clausocalanidae	*Pseudocalanus newmani*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Clausocalanidae	*Pseudocalanus* sp.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Metridinidae	*Metridia pacifica*	0	0	1	0	0	1	1	1	1	0	0	1	1	1	1	1	1	1	1	0	0
Ar	Hexanauplia	Calanoida	Paracalanidae	*Paracalanus parvus*	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Paracalanidae	*Paracalanus* sp.	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Ar	Hexanauplia	Calanoida	Pontellidae	*Epilabidocera amphitrites*	0	1	1	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Calanoida	Temoridae	*Temora* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ar	Hexanauplia	Calanoida	Tortanidae	*Tortanus discaudatus*	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0
Ar	Hexanauplia	Calanoida			0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Cyclopoida	Cyclopidae	*Acanthocyclops vernalis*	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Cyclopoida	Cyclopidae	*Acanthocyclops* sp.	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
Ar	Hexanauplia	Cyclopoida	Oithonidae	*Oithona similis*	0	1	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	1	0	0
Ar	Hexanauplia	Harpacticoida	Ectinosomatidae	*Ectinosoma melaniceps*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Harpacticidae	*Harpacticus uniremis*	0	1	0	0	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Miraciidae	*Amonardia normani*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ar	Hexanauplia	Harpacticoida	Miraciidae	*Amonardia perturbata*	1	1	0	0	1	0	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Miraciidae	*Amphiascopsis cinctus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Miraciidae	*Diosaccus spinatus*	1	0	0	1	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Miraciidae	*Sarsamphiascus undosus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ar	Hexanauplia	Harpacticoida	Tisbidae	*Scutellidium* sp.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Tisbidae	*Tisbe* sp.	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	1	1	0	0	0	0

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P	**Class**	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Ar	Hexanauplia	Harpacticoida			0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0
Ar	Hexanauplia	Poecilostomatoida	Bomolochidae	*Bomolochus cuneatus*	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
Ar	Hexanauplia	Poecilostomatoida			0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	1
Ar	Hexanauplia				1	0	0	1	1	0	1	0	0	1	0	1	1	1	0	1	0	1	1	0	1
Ar	Malacostraca	Amphipoda	Ampithoidae	*Peramphithoe humeralis*	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Ampithoidae		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Aoridae	*Aoroides intermedius*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Aoridae		0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Calliopiidae	*Paracalliopiella pratti*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Calliopiidae		1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Corophiidae		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Hyalidae	*Apohyale anceps*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Hyalidae	*Apohyale* sp.	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Hyalidae		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Hyperiidae	*Parathemisto pacifica*	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Hyperiidae		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Ischyroceridae	*Ischyrocerus anguipes*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Ar	Malacostraca	Amphipoda	Ischyroceridae	*Jassa staudei*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ar	Malacostraca	Amphipoda	Ischyroceridae		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ar	Malacostraca	Amphipoda	Melitidae	*Megamoera subtener*	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Melitidae		1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda			0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ar	Malacostraca	Decapoda	Atelecyclidae	*Telmessus cheiragonus*	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Callianassidae	*Neotrypaea* sp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Cancridae	*Cancer productus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ar	Malacostraca	Decapoda	Cancridae	*Glebocarcinus oregonensis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ar	Malacostraca	Decapoda	Cancridae	*Romaleon branneri*	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Cancridae	*Cancer productus*	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0
Ar	Malacostraca	Decapoda	Crangonidae	*Argis levior*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Crangonidae	*Crangon alaskensis*	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Epialtidae	*Mimulus foliatus*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Epialtidae	*Pugettia gracilis*	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
Ar	Malacostraca	Decapoda	Epialtidae	*Pugettia producta*	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Epialtidae	*Pugettia richii*	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Hippolytidae	*Heptacarpus* sp.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Hippolytidae	*Spirontocaris* sp.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Hippolytidae		0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0

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P	**Class**	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Ar	Malacostraca	Decapoda	Lithodidae	*Phyllolithodes papillosus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ar	Malacostraca	Decapoda	Munididae	*Grimothea quadrispina*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ar	Malacostraca	Decapoda	Oregoniidae	*Oregonia gracilis*	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Discorsopagurus schmitti*	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Elassochirus tenuimanus*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Pagurus beringanus*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Pagurus caurinus*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Ar	Malacostraca	Decapoda	Paguridae	*Pagurus hirsutiusculus*	0	0	0	0	1	1	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Pagurus kennerlyi*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Pagurus* sp.	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Pandalidae	*Pandalus hypsinotus**	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Panopeidae	*Lophopanopeus bellus*	1	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0
Ar	Malacostraca	Decapoda	Pinnotheridae	*Fabia subquadrata*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ar	Malacostraca	Decapoda	Pinnotheridae	*Pinnixa faba*	0	1	0	0	1	0	0	1	1	1	1	0	0	0	0	1	1	0	0	1	0
Ar	Malacostraca	Decapoda	Pinnotheridae		1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Ar	Malacostraca	Decapoda	Pisidae	*Chorilia longipes*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Pisidae	*Scyra acutifrons*	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Porcellanidae	*Petrolisthes cinctipes*	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Porcellanidae	*Petrolisthes eriomerus*	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	0	0	0
Ar	Malacostraca	Decapoda	Upogebiidae	*Upogebia pugettensis*	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Varunidae	*Hemigrapsus nudus*	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Varunidae	*Hemigrapsus oregonensis*	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Euphausiacea*			0	0	1	1	0	1	1	0	0	0	0	0	0	0	1	0	1	1	0	1	1
Ar	Malacostraca	Isopoda	Entoniscidae	*Portunion conformis*	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Isopoda			0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Ostracoda	Halocyprida	Halocyprididae	*Discoconchoecia* sp.	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Ar	Thecostraca	Balanomorpha	Balanidae	*Amphibalanus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Ar	Thecostraca	Balanomorpha	Balanidae	*Balanus crenatus*	0	0	1	1	0	0	0	0	0	1	1	0	1	0	1	0	0	1	1	0	0
Ar	Thecostraca	Balanomorpha	Balanidae	*Balanus glandula*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Thecostraca	Balanomorpha	Balanidae	*Balanus nubilus*	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1
Ar	Thecostraca	Balanomorpha	Balanidae	*Balanus rostratus*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1
Ar	Thecostraca	Balanomorpha	Balanidae	*Balanus* sp.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Thecostraca	Balanomorpha	Balanidae	*Semibalanus balanoides*	0	1	0	1	0	0	0	0	1	1	1	0	0	0	1	1	1	0	1	0	1
Ar	Thecostraca	Balanomorpha	Balanidae	*Semibalanus cariosus*	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1
Ar	Thecostraca	Balanomorpha	Balanidae	*Solidobalanus engbergi*	1	1	1	1	1	0	0	1	1	0	0	1	1	0	1	0	1	1	1	0	1
Ar	Thecostraca	Balanomorpha	Balanidae		0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0
Ar	Thecostraca	Balanomorpha	Chthamalidae	*Chthamalus dalli*	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1

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P	**Class**	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Ar	Thecostraca	Balanomorpha	Chthamalidae		1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1
Br	Rhynchonellata	Terebratulida	Laqueidae	*Laqueus californianus*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
By	Gymnolaemata	Cheilostomatida	Bugulidae	*Dendrobeania lichenoides*	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
By	Gymnolaemata	Cheilostomatida	Bugulidae	*Dendrobeania murrayana*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
By	Gymnolaemata	Cheilostomatida	Calloporidae	*Cauloramphus* sp.	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
By	Gymnolaemata	Cheilostomatida	Candidae	*Tricellaria ternata*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
By	Gymnolaemata	Cheilostomatida	Celleporidae	*Celleporina ventricosa*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
By	Gymnolaemata	Cheilostomatida	Hippothoidae	*Celleporella hyalina*	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
By	Gymnolaemata	Cheilostomatida	Membraniporidae	*Membranipora villosa*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
By	Gymnolaemata	Cheilostomatida	Membraniporidae	*Membranipora* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
By	Gymnolaemata	Cheilostomatida	Phidoloporidae	*Rhynchozoon tumulosum*	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	1
By	Gymnolaemata	Ctenostomatida	Alcyonidiidae	*Alcyonidium* sp.	1	1	1	1	1	0	0	1	1	1	0	1	0	1	1	0	1	1	1	0	0
By	Gymnolaemata	Ctenostomatida	Vesiculariidae	*Amathia* sp.	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
By	Stenolaemata	Cyclostomatida	Crisiidae	*Crisia* sp.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
By					1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0
Ch	Sagittoidea				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
Cd	Ascidiacea	Phlebobranchia	Ascidiidae	*Ascidia columbiana*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cd	Ascidiacea	Phlebobranchia	Corellidae	*Corella inflata*	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Cd	Ascidiacea	Stolidobranchia	Pyuridae	*Boltenia villosa*	0	1	0	1	1	0	1	0	0	0	0	0	0	1	0	1	1	1	0	0	0
Cd	Ascidiacea	Stolidobranchia	Pyuridae	*Boltenia* sp.	0	0	0	1	1	0	1	0	0	0	0	0	0	1	1	1	0	1	1	0	0
Cd	Ascidiacea	Stolidobranchia	Pyuridae	*Pyura haustor*	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	1	1	0	0
Cd	Ascidiacea	Stolidobranchia	Styelidae	*Cnemidocarpa finmarkiensis*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Cd	Ascidiacea	Stolidobranchia	Styelidae	*Styela gibbsii*	1	1	0	1	0	0	0	1	0	1	0	1	1	1	1	1	0	1	1	1	1
Cd	Ascidiacea				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Cn	Anthozoa	Actiniaria	Actiniidae	*Anthopleura* sp.	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Actiniaria	Actiniidae	*Epiactis* sp.	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
Cn	Anthozoa	Actiniaria	Actiniidae	*Urticina* sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Actiniaria	Actiniidae		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Actiniaria	Actinostolidae		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Actiniaria	Edwardsiidae	*Edwardsia* sp.	1	0	0	0	1	0	0	1	1	0	1	0	1	0	0	1	1	0	0	0	0
Cn	Anthozoa	Actiniaria	Edwardsiidae		1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0
Cn	Anthozoa	Actiniaria	Hormathiidae		0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Actiniaria	Metridiidae	*Metridium senile*	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	0
Cn	Anthozoa	Actiniaria	Metridiidae	*Metridium* sp.	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0	1	1	1	1	1	0
Cn	Anthozoa	Actiniaria	Sagartiidae	*Sagartiogeton awii*	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0
Cn	Anthozoa	Actiniaria			1	1	0	1	1	0	1	1	1	0	0	0	1	0	0	1	1	0	0	0	0
Cn	Anthozoa	Malacalcyonacea*	Nephtheidae	*Gersemia rubiformis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0

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Cn	Anthozoa	Malacalcyonacea*	Nephtheidae	*Gersemia* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Cn	Anthozoa	Malacalcyonacea*	Plexauridae		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Malacalcyonacea*			0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Scleractinia*	Caryophylliidae	*Caryophyllia arnoldi*	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Scleractinia*	Dendrophylliidae	*Balanophyllia elegans*	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Scleractinia*			1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Scleralcyonacea*	Pennatulidae	*Ptilosarcus gurneyi*	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0
Cn	Anthozoa	Scleralcyonacea*	Pennatulidae		1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0
Cn	Anthozoa	Scleralcyonacea*	Primnoidae		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Scleralcyonacea*			0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Cn	Anthozoa	Spirularia	Cerianthidae	*Pachycerianthus* sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Zoantharia	Epizoanthidae	*Epizoanthus* sp.	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1	0	0	1
Cn	Anthozoa				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Cn	Hydrozoa	Anthoathecata	Bougainvilliidae	*Bougainvillia* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Clavidae	*Rhizogeton nudus*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0
Cn	Hydrozoa	Anthoathecata	Corymorphidae	*Euphysa* sp.	1	1	0	0	0	0	0	0	0	1	1	0	0	1	0	0	1	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Corymorphidae	*Hataia parva*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Corynidae	*Sarsia tubulosa*	0	1	0	0	1	0	0	1	0	1	1	1	1	0	1	1	1	0	0	1	1
Cn	Hydrozoa	Anthoathecata	Corynidae	*Sarsia* sp.	0	1	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Corynidae		0	0	1	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Hydractiniidae	*Schuchertinia milleri*	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Pandeidae	*Catablema* sp.	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Cn	Hydrozoa	Anthoathecata	Pandeidae	*Halitholus* sp.	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
Cn	Hydrozoa	Anthoathecata	Pandeidae	*Leuckartiara longicalcar*	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1
Cn	Hydrozoa	Anthoathecata	Pandeidae	*Neoturris breviconis*	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Cn	Hydrozoa	Anthoathecata	Pandeidae	*Stomotoca atra*	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0
Cn	Hydrozoa	Anthoathecata	Proboscidactylidae	*Proboscidactyla flavicirrata*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cn	Hydrozoa	Anthoathecata	Rathkeidae	*Rathkea octopunctata*	1	0	1	0	1	1	0	1	0	1	0	1	1	1	1	1	1	0	1	1	0
Cn	Hydrozoa	Anthoathecata	Stylasteridae		0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Tubulariidae	*Ectopleura viridis*	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	1	0	1	0
Cn	Hydrozoa	Anthoathecata	Tubulariidae	*Hybocodon prolifer*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0
Cn	Hydrozoa	Leptothecata	Aequoreidae	*Aequorea* sp.	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	1	1
Cn	Hydrozoa	Leptothecata	Campanulariidae	*Campanularia volubilis*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata	Campanulariidae	*Gonothyraea loveni*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata	Campanulariidae	*Orthopyxis everta*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata	Campanulariidae	*Orthopyxis integra*	1	1	1	1	1	1	0	1	0	0	0	0	1	0	1	1	1	0	0	0	0
Cn	Hydrozoa	Leptothecata	Clytiidae	*Clytia gracilis*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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P	Class	Order	Family	Species	1S	2B	2S	3B	4S	5B	5S	6B	6S	7B	7S	8B	8S	9B	9S	10B	11S	12B	12S	13B	13S
Cn	Hydrozoa	Leptothecata	Clytiidae	*Clytia gregaria*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cn	Hydrozoa	Leptothecata	Clytiidae	*Clytia hemisphaerica*	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata	Clytiidae	*Clytia* sp.	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1
Cn	Hydrozoa	Leptothecata	Eirenidae	*Eutonina indicans*	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	0	0	1	1	1	1
Cn	Hydrozoa	Leptothecata	Haleciidae	*Halecium* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Cn	Hydrozoa	Leptothecata	Lafoeidae	*Lafoea dumosa*	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	1	0	0	0
Cn	Hydrozoa	Leptothecata	Laodiceidae	*Ptychogena lactea*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata	Mitrocomidae	*Mitrocoma cellularia*	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Cn	Hydrozoa	Leptothecata	Mitrocomidae	*Mitrocomella polydiademata*	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1
Cn	Hydrozoa	Leptothecata	Obeliidae	*Obelia dichotoma*	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0
Cn	Hydrozoa	Leptothecata	Obeliidae	*Obelia* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Cn	Hydrozoa	Leptothecata	Plumulariidae	*Plumularia lagenifera*	1	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0
Cn	Hydrozoa	Leptothecata	Plumulariidae	*Plumularia setacea*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
Cn	Hydrozoa	Leptothecata	Sertulariidae	*Symplectoscyphus tricuspidatus*	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	1	1	1	0	0
Cn	Hydrozoa	Leptothecata			0	0	1	0	1	1	1	1	1	1	1	0	0	0	1	0	1	1	1	0	1
Cn	Hydrozoa	Limnomedusae			0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Narcomedusae	Cuninidae	*Solmissus* sp.	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Siphonophorae	Agalmatidae	*Agalma elegans*	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Siphonophorae	Agalmatidae	*Nanomia* sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Siphonophorae	Diphyidae	*Chelophyes appendiculata*	1	1	1	0	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	1
Cn	Hydrozoa				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cn	Scyphozoa	Semaeostomeae	Cyaneidae	*Cyanea* sp.	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Cn	Scyphozoa	Semaeostomeae	Ulmaridae	*Aurelia labiata*	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Cn	Scyphozoa	Semaeostomeae	Ulmaridae	*Aurelia* sp.	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Cn	Staurozoa	Stauromedusae	Haliclystidae	*Haliclystus sanjuanensis*	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Ct	Tentaculata	Cydippida	Pleurobrachiidae	*Pleurobrachia bachei*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Ct	Tentaculata	Lobata	Bolinopsidae	*Bolinopsis microptera*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ec	Asteroidea	Forcipulatida	Asteriidae	*Evasterias troschelii*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ec	Asteroidea	Forcipulatida	Asteriidae	*Leptasterias aequalis*	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Asteroidea	Forcipulatida	Asteriidae	*Leptasterias hexactis*	1	1	1	1	1	0	0	1	1	0	0	0	0	0	1	0	1	1	1	0	1
Ec	Asteroidea	Forcipulatida	Asteriidae	*Leptasterias polaris*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Asteroidea	Forcipulatida	Asteriidae	*Leptasterias* sp.	1	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Asteroidea	Forcipulatida	Asteriidae	*Lethasterias nanimensis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ec	Asteroidea	Forcipulatida	Asteriidae	*Orthasterias koehleri*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0	0
Ec	Asteroidea	Forcipulatida	Asteriidae	*Pisaster brevispinus*	1	1	1	1	1	1	0	1	1	0	0	0	0	1	0	1	1	0	1	1	0
Ec	Asteroidea	Forcipulatida	Asteriidae	*Pisaster ochraceus**	1	1	1	1	1	0	1	1	1	0	0	0	1	0	0	1	1	0	1	0	1
Ec	Asteroidea	Forcipulatida	Asteriidae	*Pycnopodia helianthoides**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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P	**Class**	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Ec	Asteroidea	Forcipulatida	Asteriidae	*Stylasterias forreri*	1	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0
Ec	Asteroidea	Paxillosida	Luidiidae	*Luidia foliolata*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1
Ec	Asteroidea	Spinulosida	Echinasteridae	*Henricia leviuscula*	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
Ec	Asteroidea	Spinulosida	Echinasteridae	*Henricia* sp.	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Asteroidea	Valvatida	Asterinidae	*Patiria miniata*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Ec	Asteroidea	Valvatida	Goniasteridae	*Ceramaster* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ec	Asteroidea	Valvatida	Poraniidae	*Dermasterias imbricata*	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1
Ec	Asteroidea	Velatida	Pterasteridae	*Pteraster tesselatus*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Ec	Asteroidea	Velatida	Pterasteridae	*Pteraster* sp.	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Asteroidea	Velatida	Solasteridae	*Crossaster papposus*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ec	Asteroidea	Velatida	Solasteridae	*Solaster dawsoni*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Asteroidea	Velatida	Solasteridae	*Solaster endeca*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Ec	Crinoidea	Comatulida	Antedonidae	*Florometra serratissima*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Allocentrotus fragilis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Mesocentrotus franciscanus^**	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Strongylocentrotus droebachiensis^**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Strongylocentrotus pallidus*	1	1	1	0	1	1	1	1	1	0	0	1	0	1	1	0	1	1	1	1	1
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Strongylocentrotus purpuratus^*	1	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Strongylocentrotus* sp.	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Ec	Echinoidea	Clypeasteroida	Dendrasteridae	*Dendraster excentricus*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Echinoidea	Spatangoida	Schizasteridae	*Brisaster latifrons*	0	0	1	1	0	1	1	0	0	0	0	1	1	0	0	0	0	1	1	1	0
Ec	Holothuroidea	Apodida	Synaptidae	*Leptosynapta clarki*	1	1	0	1	1	0	0	1	1	1	1	0	0	0	0	0	1	0	0	1	1
Ec	Holothuroidea	Aspidochirotida	Stichopodidae	*Apostichopus californicus*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Cucumaria miniata*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Cucumaria pallida*	0	0	1	1	0	0	0	1	1	0	1	1	1	0	0	1	1	0	1	0	1
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Cucumaria piperata*	0	1	0	0	1	1	0	0	0	0	0	1	1	0	1	0	1	1	1	1	1
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Cucumaria vegae*	1	1	1	1	1	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Cucumaria* sp.	1	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Pseudocnus curatus*	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Pseudocnus* sp.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Cucumariidae		1	1	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae	*Pentamera lissoplaca*	0	1	0	1	0	0	0	0	0	0	0	1	1	0	0	1	0	0	1	0	0
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae	*Pentamera rigida*	0	0	0	0	0	1	1	0	0	1	1	0	0	1	0	0	1	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae	*Pentamera* sp.	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	1
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae	*Thyone benti*	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1	0	0
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae	*Thyonidium kurilensis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae		0	1	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1	1	1	0	0

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P	**Class**	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Ec	Holothuroidea	Dendrochirotida	Psolidae	*Psolus chitonoides*	0	1	1	1	0	0	0	1	1	1	1	0	1	0	0	0	1	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Sclerodactylidae	*Eupentacta pseudoquinquesemita*	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	1	1	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Sclerodactylidae	*Eupentacta* sp.	0	0	0	1	1	0	0	1	0	1	1	0	0	1	0	1	1	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Sclerodactylidae	*Pseudothyone levini*	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1
Ec	Holothuroidea	Molpadida	Molpadiidae	*Molpadia* sp.	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Ec	Ophiuroidea	Amphilepidida	Amphiuridae	*Amphiodia occidentalis*	0	1	1	0	0	0	0	1	1	0	0	0	1	0	0	1	1	0	1	0	0
Ec	Ophiuroidea	Amphilepidida	Amphiuridae	*Amphiodia* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ec	Ophiuroidea	Amphilepidida	Amphiuridae	*Amphipholis squamata*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Ophiuroidea	Amphilepidida	Amphiuridae	*Amphipholis* sp.	1	0	0	1	1	0	1	1	1	0	0	1	1	0	1	0	0	1	1	0	0
Ec	Ophiuroidea	Amphilepidida	Ophiactidae	*Ophiopholis aculeata*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ec	Ophiuroidea	Amphilepidida	Ophiactidae	*Ophiopholis kennerlyi*	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1
Ec	Ophiuroidea	Amphilepidida	Ophiactidae	*Ophiopholis* sp.	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1
Ec	Ophiuroidea	Amphilepidida	Ophiuridae	*Ophiura luetkenii*	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	1	0	1	1	1	1
Ec	Ophiuroidea	Amphilepidida			0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	1	0	1	1	1	1
Mo	Bivalvia	Adapedonta	Hiatellidae	*Hiatella arctica*	1	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0
Mo	Bivalvia	Adapedonta	Hiatellidae	*Panopea generosa**	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1
Mo	Bivalvia	Arcoida	Glycymeridae	*Glycymeris* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Mo	Bivalvia	Cardiida	Cardiidae	*Clinocardium nuttallii**	0	1	0	1	0	0	1	0	0	1	1	0	0	1	1	1	1	0	0	0	0
Mo	Bivalvia	Cardiida	Tellinidae	*Macoma balthica*	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Bivalvia	Cardiida	Tellinidae	*Macoma nasuta*	0	1	1	1	1	0	0	1	1	1	1	0	0	1	0	1	1	0	1	0	1
Mo	Bivalvia	Cardiida	Tellinidae	*Tellina nuculoides*	1	1	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Mo	Bivalvia	Galeommatida	Lasaeidae	*Kellia suborbicularis*	0	0	1	1	0	0	0	0	0	1	1	0	1	1	1	0	0	0	1	0	0
Mo	Bivalvia	Lucinida	Thyasiridae	*Axinopsida serricata*	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	0
Mo	Bivalvia	Myida	Myidae	*Mya arenaria*	0	0	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Bivalvia	Myida	Myidae	*Mya truncata*	0	1	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
Mo	Bivalvia	Myida	Myidae	*Mya* sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Bivalvia	Myida	Teredinidae	*Bankia setacea*	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Mo	Bivalvia	Myida	Xylophagaidae	*Xylophaga washingtona*	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Mo	Bivalvia	Mytilida	Mytilidae	*Modiolus modiolus*	0	1	0	0	1	1	0	1	1	0	0	1	0	1	1	1	1	1	1	0	0
Mo	Bivalvia	Mytilida	Mytilidae	*Mytilus trossulus*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
Mo	Bivalvia	Mytilida	Mytilidae	*Mytilus* sp.	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0
Mo	Bivalvia	Nuculida	Nuculidae	*Acila castrensis*	0	1	1	1	0	1	1	0	0	0	0	1	1	1	1	1	1	1	0	1	1
Mo	Bivalvia	Nuculida	Nuculidae	*Ennucula tenuis*	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Mo	Bivalvia	Venerida	Mactridae	*Tresus capax**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	0	1
Mo	Bivalvia	Venerida	Mactridae	*Tresus* sp.	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	1
Mo	Bivalvia	Venerida	Turtoniidae	*Turtonia minuta*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Mo	Bivalvia	Venerida	Veneridae	*Compsomyax subdiaphana*	0	0	1	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1

					Site Code																							
P	Class	Order	Family	Species	1S	2B	2S	3B	4S	5B	5S	6B	6S	7B	7S	8B	8S	9B	9S	10B	11S	12B	12S	13B	13S
Mo	Bivalvia	Venerida	Veneridae	*Humilaria kennerleyi*	1	1	1	1	1	0	1	1	1	0	0	0	0	1	0	1	1	1	1	1	1
Mo	Bivalvia	Venerida	Veneridae	*Leukoma staminea^**	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Mo	Bivalvia	Venerida	Veneridae	*Nutricola tantilla*	1	0	0	1	0	0	0	0	1	1	1	1	1	0	0	1	0	0	0	1	0
Mo	Bivalvia	Venerida	Veneridae	*Saxidomus gigantea^**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mo	Cephalopoda	Myopsida	Loliginidae	*Doryteuthis opalescens**	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Cephalopoda	Myopsida	Loliginidae		1	0	0	0	1	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Mo	Cephalopoda	Octopoda	Octopodidae	*Enteroctopus dofleini^**	1	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Cephalopoda	Octopoda	Octopodidae		1	0	0	0	1	0	1	1	1	0	0	0	1	0	0	0	1	0	0	0	0
Mo	Gastropoda	Cephalaspidea	Gastropteridae	*Gastropteron pacificum*	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Lepetellida	Lepetodrilidae	*Clypeosectus* sp.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Calyptraeidae	*Calyptraea fastigiata*	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Calyptraeidae	*Crepidula fimbriata*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Calyptraeidae	*Crepipatella lingulata*	1	0	0	0	1	0	1	1	0	0	1	0	1	1	0	1	0	1	0	0	0
Mo	Gastropoda	Littorinimorpha	Calyptraeidae		1	0	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0	1	0	0	0
Mo	Gastropoda	Littorinimorpha	Lacunidae	*Lacuna variegata*	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	1	1	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Lacunidae	*Lacuna vincta*	1	1	1	0	1	0	0	1	0	0	1	0	0	1	1	0	1	0	1	0	0
Mo	Gastropoda	Littorinimorpha	Littorinidae	*Littorina plena**	1	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	1	0	0	0	1
Mo	Gastropoda	Littorinimorpha	Littorinidae	*Littorina scutulata**	1	0	0	0	1	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Littorinidae	*Littorina sitkana**	1	1	0	1	1	0	0	1	1	0	1	0	1	0	1	0	1	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Littorinidae	*Littorina subrotundata**	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Littorinidae	*Littorina sp.**	1	0	0	0	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Naticidae	*Cryptonatica aleutica*	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0
Mo	Gastropoda	Littorinimorpha	Velutinidae	*Limneria prolongata*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Velutinidae	*Velutina* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Columbellidae	*Amphissa columbiana*	1	0	0	0	1	0	1	1	1	0	0	1	1	0	0	0	0	1	0	0	1
Mo	Gastropoda	Neogastropoda	Columbellidae	*Amphissa reticulata*	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Columbellidae	*Amphissa versicolor*	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Columbellidae	*Mitrella gausapata*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
Mo	Gastropoda	Neogastropoda	Columbellidae	*Mitrella tuberosa*	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Muricidae	*Nucella canaliculata*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Muricidae	*Nucella lamellosa*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Muricidae	*Nucella ostrina*	0	0	0	0	1	0	0	1	1	0	1	0	0	0	1	0	1	0	0	0	0
Mo	Gastropoda	Neogastropoda	Nassariidae	*Nassarius mendicus*	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Nassariidae	*Nassarius* sp.	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Olividae	*Callianax biplicata*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Olividae	*Olivella baetica*	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Aeolidiidae	*Aeolidia* sp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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P	**Class**	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Mo	Gastropoda	Nudibranchia	Apataidae	*Apata pricei*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Arminidae	*Armina californica*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Chromodorididae	*Cadlina* sp.	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Coryphellidae	*Coryphella verrucosa*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Mo	Gastropoda	Nudibranchia	Coryphellidae	*Microchlamylla amabilis*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Cuthonellidae	*Cuthonella concinna*	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Cuthonidae	*Cuthona nana*	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dendronotidae	*Dendronotus iris*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dendronotidae	*Melibe leonina*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dironidae	*Dirona albolineata*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Discodorididae	*Peltodoris nobilis*	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Doridiidae	*Doris montereyensis*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Doridiidae	*Doris odhneri*	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Doridiidae	*Geitodoris heathi*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Doridiidae	*Rostanga pulchra*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dotidae	*Doto amyra*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dotidae	*Doto* sp.	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Eubranchidae	*Eubranchus alexeii*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Eubranchidae	*Eubranchus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Glaucidae	*Hermissenda crassicornis*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Onchidoridae	*Acanthodoris hudsoni*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Onchidoridae	*Acanthodoris nanaimoensis*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Onchidoridae	*Diaphorodoris lirulatocauda*	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Onchidoridae	*Onchidoris bilamellata*	0	0	0	1	0	0	0	0	0	1	1	0	0	1	1	1	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Onchidoridae	*Onchidoris muricata*	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Trinchesiidae	*Catriona* sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Trinchesiidae	*Trinchesia albocrusta*	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Trinchesiidae	*Zelentia fulgens*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Tritoniidae	*Tritonia festiva*	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Mo	Gastropoda	Nudibranchia		*Triopha catalinae*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia		*Triopha modesta*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Mo	Gastropoda	Nudibranchia		*Triopha* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Mo	Gastropoda	Nudibranchia			1	0	0	0	1	0	0	1	1	0	0	1	1	1	1	0	1	0	1	1	0
Mo	Gastropoda	Pteropoda	Clionidae	*Clione limacina*	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Pteropoda	Clionidae	*Clione* sp.	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Pteropoda	Limacinidae	*Limacina helicina*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Seguenziida	Calliotropidae	*Cidarina cidaris*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0

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P	Class	Order	Family	Species	1S	2B	2S	3B	4S	5B	5S	6B	6S	7B	7S	8B	8S	9B	9S	10B	11S	12B	12S	13B	13S
Mo	Gastropoda	Siphonariida	Siphonariidae	*Siphonaria thersites*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Trochida	Calliostomatidae	*Calliostoma annulatum*	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Trochida	Calliostomatidae	*Calliostoma ligatum*	1	1	1	1	1	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0
Mo	Gastropoda	Trochida	Calliostomatidae	*Calliostoma variegatum*	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	1	0	0
Mo	Gastropoda	Trochida	Colloniidae	*Homalopoma baculum*	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Trochida	Colloniidae	*Homalopoma luridum*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Mo	Gastropoda	Trochida	Margaritidae	*Margarites pupillus*	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1
Mo	Gastropoda	Trochida	Margaritidae	*Margarites* sp.	1	1	1	1	1	0	1	1	1	0	0	0	1	1	1	1	1	1	1	0	1
Mo	Gastropoda	Trochida	Tegulidae	*Tegula pulligo*	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Trochida	Trochidae	*Lirularia succincta*	1	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	1	0	0	0	0
Mo	Gastropoda		Acmaeidae	*Acmaea mitra*	1	0	0	1	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0
Mo	Gastropoda		Hermaeidae	*Hermaea oliviae*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda		Lepetidae	*Lepeta* sp.	0	1	1	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda		Limapontiidae	*Placida dendritica*	0	1	0	0	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0
Mo	Gastropoda		Limapontiidae	*Stiliger fuscovittatus*	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	1	0	1	0	0
Mo	Gastropoda		Lottiidae	*Lottia digitalis*	1	1	0	0	1	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0
Mo	Gastropoda		Lottiidae	*Lottia paradigitalis*	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1
Mo	Gastropoda		Lottiidae	*Lottia pelta*	1	1	1	0	1	0	0	1	1	0	1	0	1	0	0	0	1	1	1	0	0
Mo	Gastropoda		Lottiidae	*Lottia scutum*	1	1	1	1	1	0	1	1	1	0	1	1	1	0	1	1	1	0	1	0	1
Mo	Gastropoda		Lottiidae	*Lottia* sp.	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1
Mo	Gastropoda		Lottiidae		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Ischnochitonidae	*Lepidozona interstincta*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Ischnochitonidae	*Lepidozona mertensii*	1	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Cryptochiton stelleri^*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Katharina tunicata*	1	1	0	1	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Mopalia kennerleyi*	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Mopalia muscosa*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Mopalia sinuata*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Mopalia spectabilis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Mopalia* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Tonicella insignis*	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Tonicella lineata*	1	1	0	0	1	0	0	1	1	0	0	0	1	0	0	1	1	0	1	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Tonicella* sp.	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0
Mo	Polyplacophora	Chitonida	Schizoplacidae	*Schizoplax brandtii*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Tonicellidae	*Cyanoplax dentiens*	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0
Mo	Polyplacophora	Chitonida			0	0	0	1	1	0	0	1	1	0	0	0	1	0	0	0	1	0	0	0	0
Mo	Scaphopoda	Dentaliida	Rhabdidae	*Rhabdus rectius*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

					Site Code																							
P	**Class**	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Nt	Enoplea	Dorylaimida	Longidoridae	*Xiphinema brevicolle*	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Ne	Enopla	Monostilifera	Amphiporidae	*Zygonemertes* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ne	Enopla	Monostilifera	Carcinonemertidae	*Carcinonemertes* sp.	1	0	0	0	1	0	0	0	1	1	1	0	0	1	0	0	1	0	0	0	1
Ne	Enopla	Monostilifera	Cratenemertidae	*Nipponnemertes bimaculata*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ne	Enopla	Monostilifera	Emplectonematidae	*Emplectonema buergeri*	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
Ne	Enopla	Monostilifera	Emplectonematidae	*Emplectonema* sp.	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0
Ne	Enopla	Monostilifera	Emplectonematidae	*Paranemertes peregrina*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ne	Enopla	Monostilifera	Ototyphlonemertidae	*Ototyphlonemertes* sp.	0	1	1	1	1	0	0	0	1	0	0	0	0	1	1	1	1	0	1	1	0
Ne	Enopla	Monostilifera	Poseidonemertidae	*Poseidonemertes* sp.	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
Ne	Enopla	Monostilifera	Tetrastemmatidae	*Tetrastemma bilineatum*	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ne	Enopla	Monostilifera	Tetrastemmatidae	*Tetrastemma* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ne	Enopla	Monostilifera		*Quasitetrastemma nigrifrons*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ne	Enopla	Monostilifera			0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ne	Palaeonemertea	Archinemertea	Cephalotrichidae	*Cephalothrix* sp.	1	1	1	1	0	1	0	1	1	1	1	0	0	0	1	0	0	0	1	0	1
Ne	Palaeonemertea	Carinomiformes	Carinomidae	*Carinoma mutabilis*	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ne	Palaeonemertea	Tubulaniformes	Tubulanidae	*Tubulanus* sp.	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ne	Palaeonemertea				0	0	0	1	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0
Ne	Pilidiophora	Heteronemertea	Lineidae	*Cerebratulus* sp.	1	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0
Ne	Pilidiophora	Heteronemertea	Lineidae	*Lineus* sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ne	Pilidiophora	Heteronemertea	Lineidae	*Maculaura alaskensis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ne	Pilidiophora	Heteronemertea	Lineidae	*Maculaura aquilonia*	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0
Ne	Pilidiophora	Heteronemertea	Lineidae	*Micrura sp.*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ne	Pilidiophora	Heteronemertea	Riseriellidae	*Riserius pugetensis*	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Ne	Pilidiophora	Heteronemertea	Riseriellidae	*Riserius* sp.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ne	Pilidiophora	Heteronemertea			0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Ph			Phoronidae	*Phoronis vancouverensis*	1	1	0	0	1	0	1	1	1	0	0	1	1	0	0	0	0	0	1	0	0
Ph			Phoronidae	*Phoronopsis harmeri*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Pl	Rhabditophora	Polycladida	Callioplanidae	*Kaburakia excelsa*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Pl	Rhabditophora	Polycladida	Notocomplanidae	*Notocomplana* sp.	1	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0
Pl	Rhabditophora	Polycladida			1	1	0	0	1	0	0	1	1	1	1	1	0	0	1	1	1	0	1	0	0
Pl	Rhabditophora	Rhabdocoela	Trigonostomidae	*Astrotorhynchus hakaiensis*	1	0	0	0	1	0	0	1	1	1	1	0	1	0	1	0	0	0	0	0	0
Po	Demospongiae*	Axinellida	Heteroxyidae	*Halicnemia* sp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Axinellida	Raspailiidae	*Hymeraphia* sp.	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Po	Demospongiae*	Biemnida	Biemnidae	*Biemna* sp.	1	0	0	0	1	0	0	1	1	1	1	0	1	1	0	0	0	1	1	0	0
Po	Demospongiae*	Bubarida	Dictyonellidae	*Scopalina jali*	1	0	0	0	1	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0
Po	Demospongiae*	Bubarida	Dictyonellidae	*Scopalina nausicae*	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0
Po	Demospongiae*	Chondrillida			1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

					Site Code																					
P	**Class**	**Order**	**Family**	**Species**	**1S**	**2B**	**2S**	**3B**	**4S**	**5B**	**5S**	**6B**	**6S**	**7B**	**7S**	**8B**	**8S**	**9B**	**9S**	**10B**	**11S**	**12B**	**12S**	**13B**	**13S**
Po	Demospongiae*	Clionaida	Clionaidae	*Cliona californiana*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Clionaida	Clionaidae	*Cliona* sp.	1	1	0	0	1	0	1	1	1	0	0	1	1	1	1	1	1	1	1	0	0
Po	Demospongiae*	Dendroceratida	Darwinellidae	*Chelonaplysilla* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Dendroceratida			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Haplosclerida	Chalinidae	*Haliclona* sp.	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0
Po	Demospongiae*	Haplosclerida	Chalinidae		1	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	1	0	1	0	0	0
Po	Demospongiae*	Haplosclerida	Niphatidae	*Pachychalina tenera*	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Haplosclerida	Petrosiidae	*Neopetrosia exigua*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Po	Demospongiae*	Haplosclerida			1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Po	Demospongiae*	Poecilosclerida	Chondropsidae		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Coelosphaeridae	*Lissodendoryx* sp.	1	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Hymedesmiidae	*Hemimycale* sp.	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Hymedesmiidae	*Phorbas* sp.	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0	1	0	0	0
Po	Demospongiae*	Poecilosclerida	Hymedesmiidae	*Plocamionida* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Microcionidae	*Antho lithophoenix*	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Microcionidae	*Clathria originalis*	0	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Microcionidae	*Clathria unoriginalis*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Microcionidae	*Clathria* sp.	1	1	0	0	1	1	0	1	1	0	0	1	1	0	0	0	0	0	1	0	0	0
Po	Demospongiae*	Poecilosclerida	Microcionidae		0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Mycalidae	*Mycale acerata*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Tedaniidae	*Tedania* sp.	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Tedaniidae		1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida			1	1	0	0	1	1	0	1	1	0	0	1	0	0	0	0	1	1	1	1	0	0
Po	Demospongiae*	Polymastiida	Polymastiidae	*Polymastia* sp.	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Suberitida	Halichondriidae	*Halichondria loma*	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Suberitida	Halichondriidae	*Halichondria panicea*	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	
Po	Demospongiae*	Suberitida	Halichondriidae	*Halichondria* sp.	1	1	0	0	1	0	0	1	1	0	0	1	1	0	0	1	1	1	0	0	0	0
Po	Demospongiae*	Suberitida	Suberitidae	*Protosuberites* sp.	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Po	Demospongiae*	Suberitida	Suberitidae	*Suberites* sp.	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
Po	Demospongiae*	Suberitida	Suberitidae		0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0
Po	Demospongiae*	Suberitida			0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Po	Demospongiae*				1	1	0	0	1	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	1	
Po	Hexactinellida*	Sceptrulophora	Aphrocallistidae	*Aphrocallistes vastus**	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Po	Hexactinellida*	Sceptrulophora	Aphrocallistidae	*Heterochone calyx**	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	
Pr	Priapulimorpha	Priapulimorphida	Priapulidae	*Priapulus caudatus*	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

*Table 6D. Invertebrate taxa detected in ship-based sampling sites 13-25, as detected by COI markers. Column "P" refers to the phylum. Phylum codes: An – Annelida, Ar – Arthropoda, Br – Brachiopoda, By – Bryozoa, Ch – Chaetognatha, Cd – Chordata, Cn – Cnidaria; Ct – Ctenophora, Ec – Echinodermata, Mo – Mollusca, Nt – Nematoda, Ne – Nemertea, Ph – Phoronida, Pl – Platyhelminthes, Po – Porifera, Pr – Priapulida. Due to the large number of sites, the information has been displayed in two tables. * ECPs for the Great Bear Sea MPA network in the NSB. ^ ecological or cultural COs for the Kitkatla Inlet Network Zones.*

					Site Codes																				
P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
An	Clitellata	Enchytraeida	Enchytraeidae	*Lumbricillus lineatus*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Clitellata	Rhynchobdellida	Glossiphoniidae	*Helobdella* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
An	Clitellata	Tubificida	Naididae	*Chaetogaster* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
An	Clitellata	Tubificida	Naididae	*Nais communis*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
An	Clitellata	Tubificida	Naididae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
An	Polychaeta	Echiuroidea	Thalassematidae	*Arhynchite pugettensis*	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
An	Polychaeta	Eunicida	Eunicidae	*Leodice valens*	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
An	Polychaeta	Eunicida	Lumbrineridae	*Lumbrineris* sp.	0	1	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
An	Polychaeta	Eunicida	Lumbrineridae		0	0	0	0	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
An	Polychaeta	Eunicida	Onuphidae	*Diopatra ornata*	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
An	Polychaeta	Eunicida	Onuphidae	*Diopatra* sp.	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Aphroditidae	*Aphrodita negligens*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Chrysopetalidae	*Paleanotus bellis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
An	Polychaeta	Phyllodocida	Glyceridae	*Glycera capitata*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Glyceridae	*Glycera nana*	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	1	0
An	Polychaeta	Phyllodocida	Glyceridae	*Glycera robusta*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Glyceridae	*Glycera* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Goniadidae	*Glycinde* sp.	0	0	0	0	1	1	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Hesionidae	*Micropodarke dubia*	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	0	0	1	1	1
An	Polychaeta	Phyllodocida	Nereididae	*Alitta* sp.	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Nereididae	*Micronereis nanaimoensis*	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0
An	Polychaeta	Phyllodocida	Nereididae	*Nereis vexillosa*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Nereididae	*Platynereis bicanaliculata*	0	1	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Nereididae	*Platynereis* sp.	1	0	0	0	1	0	0	1	0	0	1	1	1	1	1	0	0	1	1	0	0
An	Polychaeta	Phyllodocida	Nereididae		0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0
An	Polychaeta	Phyllodocida	Pholoidae	*Pholoides asperus*	1	1	0	0	0	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Phyllodocidae	*Eteone longa*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Phyllodocidae	*Pterocirrus montereyensis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
An	Polychaeta	Phyllodocida	Phyllodocidae		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
An	Polychaeta	Phyllodocida	Polynoidae	*Arctonoe pulchra*	0	1	1	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0
An	Polychaeta	Phyllodocida	Polynoidae	*Gattyana cirrhosa*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Polynoidae	*Halosydna brevisetosa*	1	0	0	0	1	0	1	0	0	0	1	0	0	0	1	1	1	0	0	1	1

					Site Codes																					
P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
An	Polychaeta	Phyllodocida	Polynoidae	*Harmothoe fragilis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
An	Polychaeta	Phyllodocida	Polynoidae	*Harmothoe imbricata*	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
An	Polychaeta	Phyllodocida	Polynoidae	*Harmothoe* sp.	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0
An	Polychaeta	Phyllodocida	Polynoidae	*Lepidonotus squamatus*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
An	Polychaeta	Phyllodocida	Polynoidae	*Lepidonotus* sp.	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
An	Polychaeta	Phyllodocida	Polynoidae		0	1	1	1	1	1	0	0	0	0	0	1	0	0	1	0	1	1	1	0	0
An	Polychaeta	Phyllodocida	Sigalionidae	*Sthenelais berkeleyi*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Exogone* sp.	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Myrianida dentalia*	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Myrianida irregularis*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Syllis alternata*	0	1	0	0	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae	*Syllis* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Phyllodocida	Syllidae		1	1	0	0	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1
An	Polychaeta	Phyllodocida			0	0	0	1	1	1	1	1	1	0	1	1	0	1	1	1	0	1	1	1	1
An	Polychaeta	Sabellida	Oweniidae	*Galathowenia oculata*	0	1	0	0	0	1	1	1	0	0	0	0	1	0	0	1	0	1	1	0	0
An	Polychaeta	Sabellida	Oweniidae		0	1	0	0	0	0	1	1	0	0	0	0	1	0	0	1	0	0	1	0	0
An	Polychaeta	Sabellida	Sabellariidae		1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
An	Polychaeta	Sabellida	Sabellidae	*Chone aurantiaca*	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
An	Polychaeta	Sabellida	Sabellidae	*Chone* sp.	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	1
An	Polychaeta	Sabellida	Sabellidae	*Eudistylia vancouveri*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0
An	Polychaeta	Sabellida	Sabellidae	*Megalomma splendida*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
An	Polychaeta	Sabellida	Sabellidae	*Myxicola aesthetica*	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
An	Polychaeta	Sabellida	Sabellidae	*Myxicola infundibulum*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
An	Polychaeta	Sabellida	Sabellidae	*Myxicola* sp.	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
An	Polychaeta	Sabellida	Sabellidae	*Schizobranchia insignis*	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Sabellida	Sabellidae		0	0	0	0	1	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0
An	Polychaeta	Spionida	Magelonidae	*Magelona* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Laonice cirrata*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Laonice* sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Polydora onagawaensis*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Polydora* sp.	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0
An	Polychaeta	Spionida	Spionidae	*Prionospio multibranchiata*	1	1	1	1	0	1	0	1	1	0	0	1	1	1	1	0	1	1	1	1	0
An	Polychaeta	Spionida	Spionidae	*Prionospio steenstrupi*	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	1
An	Polychaeta	Spionida	Spionidae	*Prionospio* sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Pseudopolydora bassarginensis*	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0

					Site Codes																					
P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
An	Polychaeta	Spionida	Spionidae	*Pseudopolydora paucibranchiata*	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0
An	Polychaeta	Spionida	Spionidae	*Rhynchospio arenincola*	0	0	0	0	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Scolelepis squamata*	0	1	0	0	1	1	0	1	0	0	0	0	1	1	1	0	0	1	0	0	0
An	Polychaeta	Spionida	Spionidae	*Scolelepis* sp.	0	0	0	0	1	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0
An	Polychaeta	Spionida	Spionidae	*Spiophanes hakaiensis*	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	1	1	1	1
An	Polychaeta	Spionida	Spionidae	*Spiophanes* sp.	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	1	1	1
An	Polychaeta	Spionida	Spionidae		1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
An	Polychaeta	Terebellida	Ampharetidae	*Amphisamytha* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Ampharetidae	*Asabellides* sp.	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	0	0
An	Polychaeta	Terebellida	Ampharetidae	*Phyllocomus hiltoni*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Cirratulidae	*Cirratulus spectabilis*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
An	Polychaeta	Terebellida	Cirratulidae	*Dodecaceria* sp.	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1
An	Polychaeta	Terebellida	Cirratulidae		0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	1	1
An	Polychaeta	Terebellida	Pectinariidae	*Pectinaria californiensis*	1	0	1	1	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Pectinariidae	*Pectinaria granulata*	1	1	1	1	1	0	0	1	1	1	0	0	1	1	1	1	0	0	1	0	0
An	Polychaeta	Terebellida	Sternaspidae	*Sternaspis* sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Terebellidae	*Eupolymnia heterobranchia*	1	1	0	0	1	1	1	1	0	0	1	1	0	1	1	1	0	1	1	0	1
An	Polychaeta	Terebellida	Terebellidae	*Lanice* sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Terebellidae	*Neoamphitrite robusta*	0	0	0	0	1	0	0	1	0	0	0	1	1	1	1	1	0	1	0	1	1
An	Polychaeta	Terebellida	Terebellidae	*Neoamphitrite* sp.	0	0	0	0	1	0	0	1	0	0	0	1	1	0	1	1	0	1	0	1	1
An	Polychaeta	Terebellida	Terebellidae	*Nicolea* sp.	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Terebellidae	*Pista wui*	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Terebellidae	*Polycirrus* sp.	1	1	0	1	1	1	0	1	0	0	0	0	1	0	1	0	1	1	1	1	1
An	Polychaeta	Terebellida	Terebellidae	*Thelepus cincinnatus*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Terebellidae	*Thelepus* sp.	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Terebellidae		0	0	1	1	0	1	0	0	1	0	0	0	1	1	0	0	0	0	1	0	0
An	Polychaeta	Terebellida	Trichobranchidae	*Terebellides* sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta	Terebellida	Trichobranchidae	*Trichobranchus hancocki*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
An	Polychaeta		Capitellidae	*Dasybranchus* sp.	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
An	Polychaeta		Capitellidae	*Notomastus* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0
An	Polychaeta		Capitellidae		0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
An	Polychaeta		Chaetopteridae	*Chaetopterus variopedatus*	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	1	1	1	1	1	0
An	Polychaeta		Chaetopteridae	*Mesochaetopterus taylori*	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0
An	Polychaeta		Chaetopteridae	*Phyllochaetopterus prolifica*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta		Chaetopteridae	*Phyllochaetopterus* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta		Maldanidae	*Axiothella rubrocincta*	1	1	0	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0

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P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
An	Polychaeta		Maldanidae	*Praxillella affinis*	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta		Opheliidae	*Armandia brevis*	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
An	Polychaeta		Opheliidae	*Ophelina acuminata*	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta		Orbiniidae	*Leitoscoloplos pugettensis*	1	0	0	1	1	1	0	0	1	0	1	1	1	1	1	0	0	1	1	1	1	1
An	Polychaeta		Orbiniidae	*Naineris dendritica*	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	1	0	0	0
An	Polychaeta		Orbiniidae	*Naineris* sp.	1	1	0	0	1	1	0	0	0	0	0	0	1	1	0	1	0	1	1	0	0	0
An	Polychaeta		Orbiniidae	*Scoloplos acmeceps*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
An	Polychaeta		Orbiniidae	*Scoloplos armiger*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
An	Polychaeta		Orbiniidae		1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	0	0
An	Polychaeta		Paraonidae	*Aricidea minuta*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
An	Polychaeta		Paraonidae	*Aricidea nolani*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
An	Polychaeta		Polygordiidae	*Polygordius* sp.	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	1	0	0	1	0	0
An	Polychaeta		Saccocirridae	*Saccocirrus* sp.	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
An	Polychaeta		Scalibregmatidae	*Scalibregma inflatum*	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta		Scalibregmatidae	*Scalibregma* sp.	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An	Polychaeta				1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
An	Sipuncula	Phascolosomatiformes	Phascolosomatidae	*Phascolosoma agassizii*	1	1	1	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	1	1	1
Ar	Branchiopoda	Diplostraca	Podonidae	*Evadne nordmanni*	1	1	0	1	0	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1
Ar	Branchiopoda	Diplostraca	Podonidae	*Evadne* sp.	1	1	0	0	0	0	1	1	1	1	1	1	1	0	0	1	0	1	1	1	1
Ar	Branchiopoda	Diplostraca	Podonidae	*Podon leuckartii*	1	0	0	0	1	0	0	1	0	0	1	1	1	1	1	1	0	1	1	0	0
Ar	Branchiopoda	Diplostraca	Sididae	*Diaphanosoma* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ar	Hexanauplia	Calanoida	Acartiidae	*Acartia longiremis*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Acartiidae	*Acartia* sp.	1	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	1	1
Ar	Hexanauplia	Calanoida	Calanidae	*Calanus glacialis*	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Calanoida	Calanidae	*Calanus marshallae*	0	0	1	1	0	0	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0
Ar	Hexanauplia	Calanoida	Calanidae	*Calanus pacificus*	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	1
Ar	Hexanauplia	Calanoida	Calanidae	*Calanus* sp.	1	1	1	1	0	0	0	1	1	1	0	0	0	1	1	1	1	1	0	1	1
Ar	Hexanauplia	Calanoida	Calanidae	*Ctenocalanus vanus*	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Calanoida	Calanidae		1	1	1	1	0	1	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Centropagidae	*Centropages abdominalis*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Clausocalanidae	*Clausocalanus parapergens*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Calanoida	Clausocalanidae	*Pseudocalanus minutus*	1	1	1	1	0	1	1	1	0	0	0	1	1	1	1	1	1	0	1	1	1
Ar	Hexanauplia	Calanoida	Clausocalanidae	*Pseudocalanus moultoni*	1	1	1	1	0	1	0	1	0	1	1	0	1	0	0	1	1	0	0	0	0
Ar	Hexanauplia	Calanoida	Clausocalanidae	*Pseudocalanus newmani*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Clausocalanidae	*Pseudocalanus* sp.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Metridinidae	*Metridia pacifica*	1	0	1	1	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	1	0
Ar	Hexanauplia	Calanoida	Paracalanidae	*Paracalanus parvus*	1	1	1	1	1	0	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1

					Site Codes																					
P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Ar	Hexanauplia	Calanoida	Paracalanidae	*Paracalanus* sp.	1	1	1	1	1	0	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1
Ar	Hexanauplia	Calanoida	Pontellidae	*Epilabidocera amphitrites*	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	1	1	1	0	0	0
Ar	Hexanauplia	Calanoida	Temoridae	*Temora* sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Calanoida	Tortanidae	*Tortanus discaudatus*	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1
Ar	Hexanauplia	Calanoida			0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Cyclopoida	Cyclopidae	*Acanthocyclops* sp.	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	1
Ar	Hexanauplia	Cyclopoida	Cyclopidae	*Eucyclops* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ar	Hexanauplia	Cyclopoida	Cyclopidae	*Euryte* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Cyclopoida	Cyclopidae		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Ar	Hexanauplia	Cyclopoida	Oithonidae	*Oithona similis*	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0
Ar	Hexanauplia	Cyclopoida			0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Ectinosomatidae	*Ectinosoma melaniceps*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Harpacticidae	*Harpacticus uniremis*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Harpacticidae	*Harpacticus* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Laophontidae	*Paralaophonte* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Miraciidae	*Amonardia perturbata*	1	0	0	0	1	1	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0
Ar	Hexanauplia	Harpacticoida	Miraciidae	*Diosaccus spinatus*	0	0	0	0	1	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Miraciidae	*Sarsamphiascus undosus*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida	Tisbidae	*Tisbe* sp.	1	0	0	0	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Ar	Hexanauplia	Harpacticoida			0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0
Ar	Hexanauplia	Poecilostomatoida			0	0	0	0	1	0	0	1	0	0	1	1	0	1	1	0	0	0	0	0	0
Ar	Hexanauplia				0	0	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Ampithoidae	*Ampithoe dalli*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Ampithoidae	*Ampithoe lacertosa*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Aoridae	*Aoroides columbiae*	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Aoridae	*Aoroides intermedius*	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Aoridae	*Aoroides* sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ar	Malacostraca	Amphipoda	Calliopiidae		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Caprellidae		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Corophiidae		0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0
Ar	Malacostraca	Amphipoda	Hyalidae	*Apohyale* sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Hyalidae		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Ischyroceridae	*Jassa staudei*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
Ar	Malacostraca	Amphipoda	Melitidae	*Megamoera subtener*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda	Melitidae		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Amphipoda			0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Atelecyclidae	*Telmessus cheiragonus*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0

					Site Codes																					
P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Ar	Malacostraca	Decapoda	Cancridae	*Metacarcinus gracilis*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ar	Malacostraca	Decapoda	Cancridae	*Romaleon branneri*	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Cancridae	*Cancer productus*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Crangonidae	*Crangon franciscorum*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Epialtidae	*Pugettia gracilis*	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Epialtidae	*Pugettia producta*	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Hippolytidae	*Heptacarpus* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Hippolytidae	*Lebbeus groenlandicus*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Hippolytidae	*Spirontocaris* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Hippolytidae		0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Lithodidae	*Cryptolithodes* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Ar	Malacostraca	Decapoda	Lithodidae	*Phyllolithodes papillosus*	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Oregoniidae	*Oregonia gracilis*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Discorsopagurus schmitti*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Elassochirus tenuimanus*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Pagurus beringanus*	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Pagurus caurinus*	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Pagurus granosimanus*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Pagurus hirsutiusculus*	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0
Ar	Malacostraca	Decapoda	Paguridae	*Pagurus* sp.	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Pandalidae	*Pandalus stenolepis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ar	Malacostraca	Decapoda	Panopeidae	*Lophopanopeus bellus*	1	1	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Pinnotheridae	*Fabia subquadrata*	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Pinnotheridae	*Pinnixa faba*	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Ar	Malacostraca	Decapoda	Pinnotheridae		0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0
Ar	Malacostraca	Decapoda	Pisidae	*Chorilia longipes*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Ar	Malacostraca	Decapoda	Pisidae	*Scyra acutifrons*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Porcellanidae	*Petrolisthes eriomerus*	1	1	0	0	1	1	1	0	1	0	0	0	1	1	1	0	0	1	1	1	1
Ar	Malacostraca	Decapoda	Upogebiidae	*Upogebia pugettensis*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ar	Malacostraca	Decapoda	Varunidae	*Hemigrapsus nudus*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ar	Malacostraca	Decapoda	Varunidae	*Hemigrapsus oregonensis*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Euphausiacea*	Euphausiidae	*Euphausia pacifica*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Ar	Malacostraca	Euphausiacea*	Euphausiidae	*Thysanoessa spinifera*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Ar	Malacostraca	Euphausiacea*			1	0	1	1	0	0	0	0	1	1	1	1	0	0	0	1	1	1	0	1	1
Ar	Malacostraca	Isopoda	Bopyridae	*Orthione griffenis*	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ar	Malacostraca	Mysida	Mysidae	*Archaeomysis sp.*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ar	Thecostraca	Balanomorpha	Balanidae	*Balanus crenatus*	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	1	1	1	0	0

					Site Codes																					
P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Ar	Thecostraca	Balanomorpha	Balanidae	*Balanus glandula*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Thecostraca	Balanomorpha	Balanidae	*Balanus nubilus*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
Ar	Thecostraca	Balanomorpha	Balanidae	*Balanus rostratus*	0	1	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0
Ar	Thecostraca	Balanomorpha	Balanidae	*Balanus* sp.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Thecostraca	Balanomorpha	Balanidae	*Semibalanus balanoides*	1	0	0	1	1	0	1	1	0	0	0	1	1	1	0	1	1	1	1	0	0
Ar	Thecostraca	Balanomorpha	Balanidae	*Semibalanus cariosus*	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Thecostraca	Balanomorpha	Balanidae	*Solidobalanus engbergi*	0	1	1	1	0	1	1	0	1	0	0	0	0	0	0	1	1	0	1	1	0
Ar	Thecostraca	Balanomorpha	Chthamalidae	*Chthamalus dalli*	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Thecostraca	Balanomorpha	Chthamalidae		1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ar	Thecostraca		Peltogastridae	*Peltogaster boschmai*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
By	Gymnolaemata	Cheilostomatida	Bugulidae	*Caulibugula ciliata*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
By	Gymnolaemata	Cheilostomatida	Bugulidae	*Dendrobeania lichenoides*	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
By	Gymnolaemata	Cheilostomatida	Bugulidae	*Dendrobeania murrayana*	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0
By	Gymnolaemata	Cheilostomatida	Calloporidae	*Cauloramphus* sp.	1	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0
By	Gymnolaemata	Cheilostomatida	Candidae	*Caberea ellisii*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
By	Gymnolaemata	Cheilostomatida	Hippothoidae	*Celleporella hyalina*	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
By	Gymnolaemata	Cheilostomatida	Membraniporidae	*Membranipora membranacea*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
By	Gymnolaemata	Cheilostomatida	Phidoloporidae	*Rhynchozoon tumulosum*	0	1	0	0	1	1	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0
By	Gymnolaemata	Ctenostomatida	Alcyonidiidae	*Alcyonidium* sp.	1	1	0	1	1	1	1	1	1	0	1	1	1	1	0	1	0	1	1	1	0
By	Gymnolaemata	Ctenostomatida	Vesiculariidae	*Amathia* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
By	Stenolaemata	Tubuliporida	Tubuliporidae	*Tubulipora* sp.	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
By					0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cd	Ascidiacea	Phlebobranchia	Ascidiidae	*Ascidia columbiana*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Cd	Ascidiacea	Stolidobranchia	Pyuridae	*Boltenia villosa*	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	1	0	0
Cd	Ascidiacea	Stolidobranchia	Pyuridae	*Boltenia* sp.	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	1	0	0
Cd	Ascidiacea	Stolidobranchia	Pyuridae	*Halocynthia aurantium*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Cd	Ascidiacea	Stolidobranchia	Pyuridae	*Pyura haustor*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Cd	Ascidiacea	Stolidobranchia	Styelidae	*Cnemidocarpa finmarkiensis*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
Cd	Ascidiacea	Stolidobranchia	Styelidae	*Styela gibbsii*	1	0	0	1	1	0	1	1	0	0	1	1	0	1	0	1	1	1	1	1	0
Cn	Anthozoa	Actiniaria	Actiniidae	*Epiactis* sp.	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Cn	Anthozoa	Actiniaria	Actiniidae	*Urticina* sp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Actiniaria	Edwardsiidae	*Edwardsia* sp.	1	0	0	0	1	1	1	0	1	0	1	0	1	0	0	0	0	0	0	1	0
Cn	Anthozoa	Actiniaria	Edwardsiidae		1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Actiniaria	Metridiidae	*Metridium senile*	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	1	1	1	0
Cn	Anthozoa	Actiniaria	Metridiidae	*Metridium* sp.	1	1	1	1	1	1	1	1	0	0	0	0	1	0	0	1	0	1	1	1	0
Cn	Anthozoa	Actiniaria	Sagartiidae	*Sagartiogeton awii*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Actiniaria			1	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0

					Site Codes																					
P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Cn	Anthozoa	Malacalcyonacea*	Nephtheidae	*Gersemia rubiformis*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
Cn	Anthozoa	Malacalcyonacea*	Nephtheidae	*Gersemia* sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
Cn	Anthozoa	Scleractinia*	Dendrophylliidae	*Balanophyllia elegans*	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Cn	Anthozoa	Scleractinia*			0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0
Cn	Anthozoa	Scleralcyonacea*	Pennatulidae	*Ptilosarcus gurneyi*	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Scleralcyonacea*	Pennatulidae		0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Scleralcyonacea*	Primnoidae		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Scleralcyonacea*			0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Anthozoa	Spirularia	Cerianthidae	*Pachycerianthus* sp.	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Cn	Anthozoa	Zoantharia	Epizoanthidae	*Epizoanthus* sp.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0
Cn	Anthozoa				0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
Cn	Hydrozoa	Anthoathecata	Clavidae	*Rhizogeton nudus*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Corymorphidae	*Euphysa* sp.	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Corymorphidae	*Hataia parva*	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
Cn	Hydrozoa	Anthoathecata	Corynidae	*Sarsia tubulosa*	1	0	1	1	1	0	0	1	0	0	1	1	1	1	0	1	0	1	1	0	0
Cn	Hydrozoa	Anthoathecata	Corynidae	*Sarsia* sp.	0	1	1	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Corynidae		0	0	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	1	0	1	0
Cn	Hydrozoa	Anthoathecata	Hydractiniidae	*Schuchertinia milleri*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Pandeidae	*Catablema* sp.	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Pandeidae	*Halitholus* sp.	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Cn	Hydrozoa	Anthoathecata	Pandeidae	*Leuckartiara longicalcar*	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Pandeidae	*Neoturris breviconis*	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Pandeidae	*Stomotoca atra*	1	1	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1
Cn	Hydrozoa	Anthoathecata	Proboscidactylidae	*Proboscidactyla flavicirrata*	0	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1
Cn	Hydrozoa	Anthoathecata	Rathkeidae	*Rathkea octopunctata*	1	1	1	1	0	1	0	1	1	1	1	1	1	0	0	1	1	1	1	1	1
Cn	Hydrozoa	Anthoathecata	Stylasteridae	*Stylaster venustus*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Stylasteridae		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Tubulariidae	*Ectopleura viridis*	0	0	1	0	1	1	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Cn	Hydrozoa	Anthoathecata	Tubulariidae	*Hybocodon prolifer*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata	Aequoreidae	*Aequorea* sp.	1	0	1	1	0	1	1	1	1	1	0	1	0	1	1	1	0	1	1	1	1
Cn	Hydrozoa	Leptothecata	Campanulariidae	*Orthopyxis integra*	0	1	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	1	0	0
Cn	Hydrozoa	Leptothecata	Clytiidae	*Clytia gregaria*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cn	Hydrozoa	Leptothecata	Clytiidae	*Clytia hemisphaerica*	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata	Clytiidae	*Clytia* sp.	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1
Cn	Hydrozoa	Leptothecata	Eirenidae	*Eutonina indicans*	0	1	0	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1	1
Cn	Hydrozoa	Leptothecata	Haleciidae	*Halecium* sp.	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata	Lafoeidae	*Lafoea dumosa*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0

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P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Cn	Hydrozoa	Leptothecata	Melicertidae	*Melicertum octocostatum*	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata	Mitrocomidae	*Mitrocoma cellularia*	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Cn	Hydrozoa	Leptothecata	Mitrocomidae	*Mitrocomella polydiademata*	0	0	1	1	0	1	1	1	1	1	1	1	0	1	0	1	0	0	1	1	1
Cn	Hydrozoa	Leptothecata	Obeliidae	*Obelia* sp.	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata	Plumulariidae	*Plumularia lagenifera*	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata	Plumulariidae	*Plumularia setacea*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0
Cn	Hydrozoa	Leptothecata	Sertulariidae	*Symplectoscyphus tricuspidatus*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Leptothecata			0	0	1	1	1	0	0	1	0	0	0	1	1	1	1	0	0	1	0	0	0
Cn	Hydrozoa	Siphonophorae	Agalmatidae	*Agalma elegans*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Siphonophorae	Agalmatidae	*Nanomia* sp.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cn	Hydrozoa	Siphonophorae	Diphyidae	*Chelophyes appendiculata*	1	1	1	0	0	1	1	0	1	1	1	1	0	1	0	0	0	0	1	1	1
Cn	Hydrozoa				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Cn	Scyphozoa	Semaeostomeae	Cyaneidae	*Cyanea* sp.	0	0	0	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0
Cn	Staurozoa	Stauromedusae	Haliclystidae	*Haliclystus sanjuanensis*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ct	Tentaculata	Cydippida	Dryodoridae	*Dryodora glandiformis*	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Ct	Tentaculata	Cydippida	Pleurobrachiidae	*Pleurobrachia bachei*	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
Ct	Tentaculata	Lobata	Bolinopsidae	*Bolinopsis microptera*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ec	Asteroidea	Forcipulatida	Asteriidae	*Evasterias troschelii*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ec	Asteroidea	Forcipulatida	Asteriidae	*Leptasterias aequalis*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Asteroidea	Forcipulatida	Asteriidae	*Leptasterias hexactis*	0	0	0	1	1	1	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0
Ec	Asteroidea	Forcipulatida	Asteriidae	*Leptasterias* sp.	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Asteroidea	Forcipulatida	Asteriidae	*Orthasterias koehleri*	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Ec	Asteroidea	Forcipulatida	Asteriidae	*Pisaster brevispinus*	1	1	1	1	1	1	1	0	1	1	1	0	1	1	0	1	0	0	0	1	1
Ec	Asteroidea	Forcipulatida	Asteriidae	*Pisaster ochraceus**	1	1	0	0	1	1	1	1	1	1	0	1	0	1	1	1	1	0	1	1	1
Ec	Asteroidea	Forcipulatida	Asteriidae	*Pycnopodia helianthoides**	0	1	1	1	0	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0
Ec	Asteroidea	Forcipulatida	Asteriidae	*Stylasterias forreri*	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Ec	Asteroidea	Paxillosida	Luidiidae	*Luidia foliolata*	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Ec	Asteroidea	Spinulosida	Echinasteridae	*Henricia leviuscula*	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	1	0
Ec	Asteroidea	Spinulosida	Echinasteridae	*Henricia* sp.	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Ec	Asteroidea	Valvatida	Goniasteridae	*Hippasteria phrygiana*	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Asteroidea	Valvatida	Poraniidae	*Dermasterias imbricata*	0	1	0	0	0	1	1	1	1	0	0	0	1	1	1	1	1	1	1	1	0
Ec	Asteroidea	Velatida	Solasteridae	*Solaster endeca*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Allocentrotus fragilis*	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Mesocentrotus franciscanus^**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

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P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Strongylocentrotus droebachiensis^**	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Strongylocentrotus pallidus*	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0	1	0	1	0	0	0
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Strongylocentrotus purpuratus^*	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Ec	Echinoidea	Camarodonta	Strongylocentrotidae	*Strongylocentrotus* sp.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ec	Echinoidea	Clypeasteroida	Dendrasteridae	*Dendraster excentricus*	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Ec	Echinoidea	Spatangoida	Schizasteridae	*Brisaster latifrons*	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Ec	Holothuroidea	Apodida	Chiridotidae	*Chiridota albatrossii*	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ec	Holothuroidea	Apodida	Synaptidae	*Leptosynapta clarki*	0	0	0	0	1	1	1	0	1	0	1	1	1	1	1	0	0	0	1	1	0
Ec	Holothuroidea	Aspidochirotida	Stichopodidae	*Apostichopus californicus*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Cucumaria miniata*	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Cucumaria pallida*	0	1	0	0	0	0	0	1	1	1	0	0	1	1	1	0	0	0	1	0	0
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Cucumaria piperata*	1	0	0	1	0	0	0	0	0	0	0	1	1	1	1	0	0	1	0	0	0
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Cucumaria vegae*	1	1	0	0	1	0	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Cucumaria* sp.	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Cucumariidae	*Pseudocnus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Cucumariidae		0	0	0	0	1	1	1	1	0	0	0	0	0	1	0	1	1	1	0	1	0
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae	*Pentamera lissoplaca*	0	1	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae	*Pentamera rigida*	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae	*Pentamera* sp.	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae	*Thyone benti*	0	0	0	0	0	1	1	0	1	0	0	0	1	0	0	0	0	1	1	1	1
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae	*Thyonidium kurilensis*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ec	Holothuroidea	Dendrochirotida	Phyllophoridae		0	1	0	0	0	0	1	1	1	0	1	0	1	0	1	1	0	0	1	0	0
Ec	Holothuroidea	Dendrochirotida	Psolidae	*Psolus chitonoides*	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0
Ec	Holothuroidea	Dendrochirotida	Sclerodactylidae	*Eupentacta pseudoquinquesemita*	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	0
Ec	Holothuroidea	Dendrochirotida	Sclerodactylidae	*Eupentacta* sp.	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0
Ec	Holothuroidea	Molpadida	Molpadiidae	*Molpadia* sp.	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
Ec	Ophiuroidea	Amphilepidida	Amphiuridae	*Amphiodia occidentalis*	1	0	0	0	1	0	0	1	0	0	0	0	1	1	1	0	0	1	1	0	0
Ec	Ophiuroidea	Amphilepidida	Amphiuridae	*Amphipholis* sp.	0	0	0	0	0	1	1	0	1	0	0	0	1	0	1	0	1	0	0	1	1
Ec	Ophiuroidea	Amphilepidida	Ophiactidae	*Ophiopholis aculeata*	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ec	Ophiuroidea	Amphilepidida	Ophiactidae	*Ophiopholis kennerlyi*	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1
Ec	Ophiuroidea	Amphilepidida	Ophiactidae	*Ophiopholis* sp.	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Ec	Ophiuroidea	Amphilepidida	Ophiuridae	*Ophiura luetkenii*	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0
Ec	Ophiuroidea	Amphilepidida			0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0
Mo	Bivalvia	Adapedonta	Hiatellidae	*Hiatella arctica*	0	1	0	0	0	1	0	1	0	0	1	0	1	1	0	1	1	1	0	1	0

					Site Codes																					
P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Mo	Bivalvia	Adapedonta	Hiatellidae	*Panopea generosa**	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
Mo	Bivalvia	Cardiida	Cardiidae	*Clinocardium nuttallii**	0	1	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0
Mo	Bivalvia	Cardiida	Cardiidae	*Keenocardium* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
Mo	Bivalvia	Cardiida	Tellinidae	*Macoma balthica*	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Mo	Bivalvia	Cardiida	Tellinidae	*Macoma nasuta*	1	1	0	1	1	0	0	1	0	0	1	1	1	1	1	1	0	0	1	0	0
Mo	Bivalvia	Cardiida	Tellinidae	*Tellina nuculoides*	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Mo	Bivalvia	Galeommatida	Lasaeidae	*Kellia suborbicularis*	1	0	0	1	1	1	1	0	0	0	0	1	1	1	0	1	1	1	1	1	0
Mo	Bivalvia	Lucinida	Thyasiridae	*Axinopsida serricata*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Mo	Bivalvia	Myida	Myidae	*Mya arenaria*	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Mo	Bivalvia	Myida	Myidae	*Mya japonica*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Bivalvia	Myida	Myidae	*Mya truncata*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	0	0
Mo	Bivalvia	Myida	Myidae	*Mya* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Bivalvia	Mytilida	Mytilidae	*Modiolus modiolus*	1	1	0	0	1	1	1	0	0	0	1	1	1	0	0	0	0	1	1	0	1
Mo	Bivalvia	Mytilida	Mytilidae	*Mytilus californianus**	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Bivalvia	Mytilida	Mytilidae	*Mytilus trossulus*	1	0	1	1	1	1	0	1	0	0	1	1	1	1	1	1	1	1	1	1	0
Mo	Bivalvia	Mytilida	Mytilidae	*Mytilus* sp.	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Mo	Bivalvia	Nuculida	Nuculidae	*Acila castrensis*	1	0	0	1	1	0	0	0	0	0	1	0	1	1	0	0	0	1	1	1	1
Mo	Bivalvia	Venerida	Mactridae	*Tresus capax**	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0
Mo	Bivalvia	Venerida	Mactridae	*Tresus* sp.	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0
Mo	Bivalvia	Venerida	Turtoniidae	*Turtonia minuta*	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Mo	Bivalvia	Venerida	Veneridae	*Compsomyax subdiaphana*	0	0	1	1	0	0	0	0	1	1	1	0	1	0	0	0	0	1	0	0	0
Mo	Bivalvia	Venerida	Veneridae	*Humilaria kennerleyi*	1	1	0	1	0	1	1	1	1	0	1	0	1	0	0	1	1	1	1	1	1
Mo	Bivalvia	Venerida	Veneridae	*Nutricola tantilla*	1	0	0	0	1	0	1	1	0	0	0	1	1	1	1	0	0	1	0	0	0
Mo	Bivalvia	Venerida	Veneridae	*Ruditapes philippinarum*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Mo	Bivalvia	Venerida	Veneridae	*Saxidomus gigantea^**	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mo	Bivalvia		Pandoridae	*Pandora bilirata*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Cephalopoda	Myopsida	Loliginidae	*Doryteuthis opalescens**	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Cephalopoda	Myopsida	Loliginidae		0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Cephalopoda	Octopoda	Octopodidae	*Enteroctopus dofleini^**	0	1	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mo	Cephalopoda	Octopoda	Octopodidae		0	1	0	0	1	1	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0
Mo	Gastropoda	Lepetellida	Lepetodrilidae	*Clypeosectus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Calyptraeidae	*Crepipatella lingulata*	0	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	0	0	1	1
Mo	Gastropoda	Littorinimorpha	Calyptraeidae		0	0	0	0	1	1	0	0	1	0	0	0	1	1	1	0	0	0	0	1	0
Mo	Gastropoda	Littorinimorpha	Lacunidae	*Lacuna variegata*	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	0	0
Mo	Gastropoda	Littorinimorpha	Lacunidae	*Lacuna vincta*	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	1	1	1
Mo	Gastropoda	Littorinimorpha	Littorinidae	*Littorina plena**	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Littorinidae	*Littorina scutulata**	1	1	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0

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P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Mo	Gastropoda	Littorinimorpha	Littorinidae	*Littorina sitkana**	1	0	0	0	1	1	0	1	0	0	0	1	1	1	1	1	0	0	1	0	0
Mo	Gastropoda	Littorinimorpha	Littorinidae	*Littorina subrotundata**	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Littorinidae	*Littorina sp.**	1	1	0	0	1	0	1	0	0	0	0	0	0	0	1	0	0	1	1	0	0
Mo	Gastropoda	Littorinimorpha	Naticidae	*Cryptonatica aleutica*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Littorinimorpha	Trichotropidae	*Trichotropis cancellata*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0
Mo	Gastropoda	Littorinimorpha	Velutinidae	*Marsenina stearnsii*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Columbellidae	*Amphissa columbiana*	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Columbellidae	*Amphissa versicolor*	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Columbellidae	*Mitrella tuberosa*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Muricidae	*Nucella canaliculata*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Mo	Gastropoda	Neogastropoda	Muricidae	*Nucella lamellosa*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Mo	Gastropoda	Neogastropoda	Muricidae	*Nucella ostrina*	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Nassariidae	*Nassarius mendicus*	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
Mo	Gastropoda	Neogastropoda	Nassariidae	*Nassarius* sp.	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Mo	Gastropoda	Neogastropoda	Olividae	*Olivella baetica*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Chromodorididae	*Cadlina* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Coryphellidae	*Coryphella verrucosa*	0	0	0	0	1	1	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Cuthonellidae	*Cuthonella concinna*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0
Mo	Gastropoda	Nudibranchia	Dendronotidae	*Dendronotus iris*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dendronotidae	*Dendronotus robilliardi*	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dendronotidae	*Dendronotus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dendronotidae	*Melibe leonina*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dironidae	*Dirona albolineata*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dironidae	*Dirona pellucida*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Discodoridae	*Diaulula sandiegensis*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Discodoridae	*Peltodoris nobilis*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Doridae	*Geitodoris heathi*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Doridae	*Rostanga pulchra*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dotidae	*Doto amyra*	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Dotidae	*Doto* sp.	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Eubranchidae	*Eubranchus alexeii*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Eubranchidae	*Eubranchus rupium*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Mo	Gastropoda	Nudibranchia	Eubranchidae	*Eubranchus* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Mo	Gastropoda	Nudibranchia	Janolidae	*Antiopella fusca*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Onchidoridae	*Acanthodoris nanaimoensis*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Onchidoridae	*Diaphorodoris lirulatocauda*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Mo	Gastropoda	Nudibranchia	Onchidoridae	*Onchidoris bilamellata*	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	1	0	0	1	0	0

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P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Mo	Gastropoda	Nudibranchia	Onchidoridiidae	*Onchidoris evincta*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Mo	Gastropoda	Nudibranchia	Onchidoridiidae	*Onchidoris muricata*	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Trinchesiidae	*Catriona columbiana*	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Trinchesiidae	*Catriona* sp.	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia	Trinchesiidae	*Trinchesia albocrusta*	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0
Mo	Gastropoda	Nudibranchia	Trinchesiidae	*Zelentia fulgens*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mo	Gastropoda	Nudibranchia			0	0	1	1	1	1	1	0	1	0	1	1	1	1	0	0	0	1	1	1	0
Mo	Gastropoda	Pteropoda	Clionidae	*Clione limacina*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Pteropoda	Clionidae	*Clione* sp.	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda	Pteropoda	Limacinidae	*Limacina helicina*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Mo	Gastropoda	Seguenziida	Calliotropidae	*Cidarina cidaris*	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Siphonariida	Siphonariidae	*Siphonaria thersites*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mo	Gastropoda	Trochida	Calliostomatidae	*Calliostoma annulatum*	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda	Trochida	Calliostomatidae	*Calliostoma canaliculatum*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Mo	Gastropoda	Trochida	Calliostomatidae	*Calliostoma ligatum*	1	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	0	1	1	0
Mo	Gastropoda	Trochida	Calliostomatidae	*Calliostoma variegatum*	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Trochida	Margaritidae	*Margarites pupillus*	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	1
Mo	Gastropoda	Trochida	Margaritidae	*Margarites* sp.	1	1	0	0	1	0	1	1	0	0	0	1	1	1	0	1	1	1	1	1	1
Mo	Gastropoda	Trochida	Tegulidae	*Tegula pulligo*	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda	Trochida	Trochidae	*Lirularia succincta*	0	0	0	0	1	1	0	0	0	0	0	1	0	1	1	0	0	0	0	0	1
Mo	Gastropoda		Acmaeidae	*Acmaea mitra*	1	1	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0
Mo	Gastropoda		Hermaeidae	*Hermaea oliviae*	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda		Lepetidae	*Lepeta* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Mo	Gastropoda		Limapontiidae	*Placida dendritica*	1	1	0	0	1	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Mo	Gastropoda		Limapontiidae	*Stiliger fuscovittatus*	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0
Mo	Gastropoda		Lottiidae	*Lottia digitalis*	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Gastropoda		Lottiidae	*Lottia paradigitalis*	1	1	0	0	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1
Mo	Gastropoda		Lottiidae	*Lottia pelta*	1	0	0	1	1	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	0
Mo	Gastropoda		Lottiidae	*Lottia scutum*	1	1	0	0	1	1	0	1	1	0	1	1	1	1	1	1	1	0	1	1	1
Mo	Gastropoda		Lottiidae	*Lottia* sp.	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1
Mo	Gastropoda		Lottiidae		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Gastropoda		Pyramidellidae	*Odostomia tenuisculpta*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Ischnochitonidae	*Lepidozona interstincta*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Ischnochitonidae	*Lepidozona mertensii*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Ischnochitonidae	*Lepidozona radians*	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Mo	Polyplacophora	Chitonida	Ischnochitonidae	*Lepidozona* sp.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Mopalia hindsii*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0

					Site Codes																					
P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Mo	Polyplacophora	Chitonida	Mopaliidae	*Mopalia kennerleyi*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Mopalia muscosa*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Mopalia sinuata*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Mopalia spectabilis*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Mopalia* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Tonicella insignis*	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Tonicella lineata*	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0
Mo	Polyplacophora	Chitonida	Mopaliidae	*Tonicella* sp.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Chitonida	Tonicellidae	*Cyanoplax dentiens*	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1	0	0	0	0	1	0
Mo	Polyplacophora	Chitonida			0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Lepidopleurida	Lepidopleuridae	*Leptochiton rugatus*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Polyplacophora	Lepidopleurida	Lepidopleuridae	*Leptochiton* sp.	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mo	Scaphopoda	Dentaliida	Rhabdidae	*Rhabdus rectius*	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nt	Enoplea	Dorylaimida	Longidoridae	*Xiphinema brevicolle*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	1	0
Ne	Enopla	Monostilifera	Amphiporidae	*Zygonemertes* sp.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ne	Enopla	Monostilifera	Carcinonemertidae	*Carcinonemertes* sp.	1	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0
Ne	Enopla	Monostilifera	Cratenemertidae	*Nipponnemertes bimaculata*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Ne	Enopla	Monostilifera	Emplectonematidae	*Emplectonema buergeri*	1	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Ne	Enopla	Monostilifera	Emplectonematidae	*Emplectonema* sp.	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0
Ne	Enopla	Monostilifera	Emplectonematidae	*Paranemertes* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ne	Enopla	Monostilifera	Oerstediidae	*Oerstedia* sp.	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ne	Enopla	Monostilifera	Ototyphlonemertidae	*Ototyphlonemertes* sp.	1	0	1	0	1	1	0	0	0	1	0	0	0	1	0	0	0	1	0	1	0
Ne	Enopla	Monostilifera	Poseidonemertidae	*Poseidonemertes* sp.	0	0	0	0	1	0	0	0	0	0	0	1	1	1	0	0	0	1	1	0	0
Ne	Enopla	Monostilifera	Tetrastemmatidae	*Tetrastemma bilineatum*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ne	Enopla	Monostilifera	Tetrastemmatidae	*Tetrastemma* sp.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Ne	Enopla	Monostilifera	Tetrastemmatidae		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Ne	Palaeonemertea	Archinemertea	Cephalotrichidae	*Cephalothrix* sp.	0	0	0	0	1	1	1	1	1	1	0	1	1	1	0	0	0	0	0	1	0
Ne	Palaeonemertea	Carinomiformes	Carinomidae	*Carinoma mutabilis*	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
Ne	Palaeonemertea	Tubulaniformes	Tubulanidae	*Tubulanus* sp.	1	1	1	1	1	1	0	1	1	0	1	1	1	1	0	0	0	1	1	1	0
Ne	Palaeonemertea				0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Ne	Pilidiophora	Heteronemertea	Lineidae	*Cerebratulus* sp.	1	0	0	0	1	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	0
Ne	Pilidiophora	Heteronemertea	Lineidae	*Maculaura aquilonia*	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ne	Pilidiophora	Heteronemertea	Riseriellidae	*Riserius pugetensis*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ne	Pilidiophora	Heteronemertea			0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ne					1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ph			Phoronidae	*Phoronis vancouverensis*	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	1	1	0
Ph			Phoronidae	*Phoronopsis harmeri*	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

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P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Pl	Rhabditophora	Polycladida	Callioplanidae	*Kaburakia excelsa*	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
Pl	Rhabditophora	Polycladida	Notocomplanidae	*Notocomplana* sp.	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
Pl	Rhabditophora	Polycladida			0	0	0	0	1	1	0	1	1	0	1	1	1	1	0	0	0	1	1	1	0
Pl	Rhabditophora	Rhabdocoela	Trigonostomidae	*Astrotorhynchus hakaiensis*	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0
Po	Demospongiae*	Axinellida	Raspailiidae	*Hymeraphia* sp.	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Biemnida	Biemnidae	*Biemna* sp.	0	1	1	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Po	Demospongiae*	Bubarida	Dictyonellidae	*Scopalina jali*	0	0	0	1	0	1	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0
Po	Demospongiae*	Bubarida	Dictyonellidae	*Scopalina nausicae*	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Po	Demospongiae*	Chondrillida			0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Po	Demospongiae*	Clionaida	Clionaidae	*Cliona* sp.	1	1	1	0	1	1	1	0	1	0	0	0	1	1	1	1	0	1	1	1	0
Po	Demospongiae*	Dendroceratida	Darwinellidae	*Chelonaplysilla* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Po	Demospongiae*	Dendroceratida			0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Po	Demospongiae*	Desmacellida	Desmacellidae	*Desmacella hyalina*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Po	Demospongiae*	Haplosclerida	Chalinidae	*Haliclona* sp.	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Po	Demospongiae*	Haplosclerida	Chalinidae		0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Po	Demospongiae*	Haplosclerida	Niphatidae	*Pachychalina tenera*	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Po	Demospongiae*	Haplosclerida			0	0	0	0	1	1	1	0	0	0	0	0	0	1	1	0	0	1	0	0	0
Po	Demospongiae*	Poecilosclerida	Coelosphaeridae	*Lissodendoryx* sp.	0	1	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Microcionidae	*Antho lithophoenix*	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Microcionidae	*Clathria originalis*	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Po	Demospongiae*	Poecilosclerida	Microcionidae	*Clathria* sp.	0	1	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
Po	Demospongiae*	Poecilosclerida	Microcionidae		0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
Po	Demospongiae*	Poecilosclerida	Mycalidae	*Mycale acerata*	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Myxillidae	*Myxilla incrustans*	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Tedaniidae	*Tedania* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida	Tedaniidae		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Po	Demospongiae*	Poecilosclerida			0	1	0	1	1	0	1	0	0	1	0	0	1	1	1	0	0	0	1	0	0
Po	Demospongiae*	Suberitida	Halichondriidae	*Halichondria loma*	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Suberitida	Halichondriidae	*Halichondria panicea*	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0
Po	Demospongiae*	Suberitida	Halichondriidae	*Halichondria* sp.	0	1	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Po	Demospongiae*	Suberitida	Suberitidae	*Protosuberites* sp.	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Suberitida	Suberitidae	*Suberites* sp.	0	0	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	1	0
Po	Demospongiae*	Suberitida	Suberitidae		0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	1	0	0
Po	Demospongiae*	Suberitida		*Homaxinella* sp.	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Demospongiae*	Suberitida			0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Po	Demospongiae*				1	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	1	0
Po	Hexactinellida*	Sceptrulophora	Aphrocallistidae	*Aphrocallistes vastus**	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

					Site Codes																				
P	**Class**	**Order**	**Family**	**Species**	**14B**	**14S**	**15B**	**15S**	**16S**	**17B**	**17S**	**18B**	**19B**	**19S**	**20B**	**20S**	**21S**	**22B**	**22S**	**23B**	**23S**	**24B**	**24S**	**25B**	**25S**
Po	Homoscleromorpha	Homosclerophorida	Oscarellidae	*Oscarella* sp.	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Homoscleromorpha	Homosclerophorida	Plakinidae	*Plakina kanaky*	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Homoscleromorpha	Homosclerophorida	Plakinidae	*Plakina* sp.	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Po	Homoscleromorpha	Homosclerophorida	Plakinidae		0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0