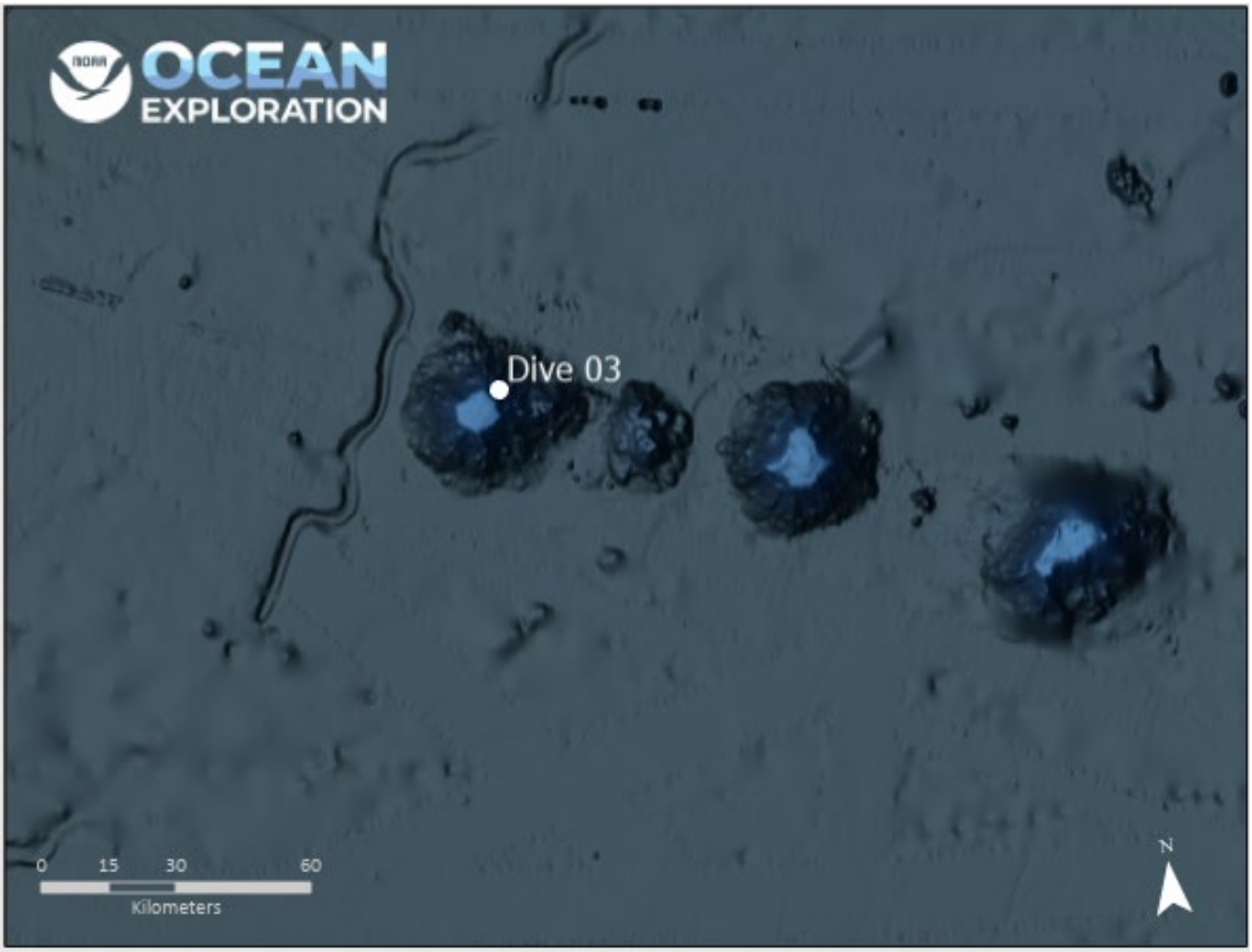
ROV Dive Summary
EX2306, Dive 03, August 26, 2023

General Location Map



Dive Information

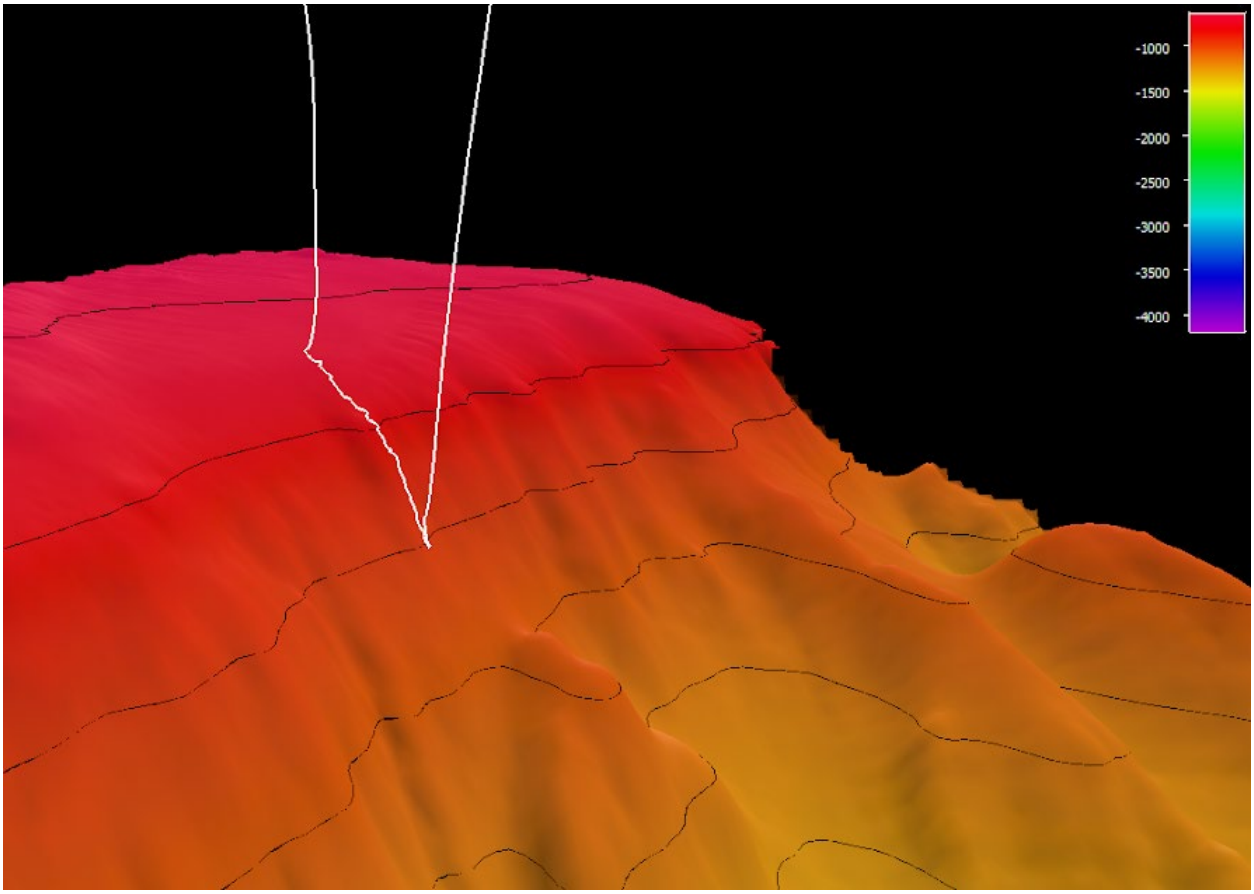
Site Name	Giacomini Seamount
General Area Descriptor	Gulf of Alaska
Science Team Leads	Merlin Best (Bio); Jamie Conrad (Geo)
Expedition Coordinator	Sam Candio
ROV Dive Supervisor	Lars Murphy
Dive Purpose	To explore the northern summit of Giacomini Seamount.
Maritime Heritage Restrictions	No
ROV Dive Summary Data	Dive Type: Normal In Water: 2023-08-26T16:25:46.009881 56.4951997036378 ; -146.312216411278 On Bottom: 2023-08-26T17:14:37.447248 56.49224882323327 ; -146.3117280572441 Off Bottom: 2023-08-26T23:20:43.931967 56.489644948298334 ; -146.31858047782885 Out Water: 2023-08-26T23:49:08.955892 56.487936405578246 ; -146.3166357697047 Dive Duration: 7:23:22 Bottom Time: 6:06:06 Max Vehicle Depth: 898.3 m Min Seafloor Depth: 733.2 m Distance Traveled: 603.7 m

Dive Description	***Geology*** This dive ascended the upper flank of Giacomini Seamount, which had well-exposed, blocky outcrops of subangular to angular basalt with light coatings of iron-staining or Fe-Mg crust. Evidence of possible flows or flow bedding were seen in a few places but most outcrops appeared massive. Near the top of the summit flanks, the bold blocky basalt outcrops became more subdued and rounded and were interspersed with pebbly and cobbly sandy sediment amid rounded basalt boulders that may represent ancient nearshore deposits. Three samples of basalt were collected from the upper flank of the seamount and 2 samples of the pebbly sands were collected by suction. ***Biology*** Observed an abundance of deep-sea corals and sponges, including Isidella tentaculum, Stolonifera, Anthoptilum cf. lithophilum, Antipatharia, Primnoidae, Pinulasma sp., and Rossellidae. A number of interesting Asteroidea were observed. A variety of biological samples were collected for further study.
Notable Observations	Paragorgia arborea, undescribed Paragorgia sp., Asthenactis sp. (a rare 9-armed sea star)
Community and Habitat Observations	Corals and Sponges — Present Chemosynthetic Community — Absent High biodiversity Community —Present Active Seep or Vent — Absent Extinct Seep or Vent — Absent Hydrates — Absent
CMECS Feature Type(s)	Boulder Field Flat Outcrop/Rock Outcrop Plateau Ridge Seamount Slope
SeaTube Link (science annotations)	https://data.oceannetworks.ca/SeaTubeV3?resourceTypeId=600&resourceId=6640

Equipment Deployed

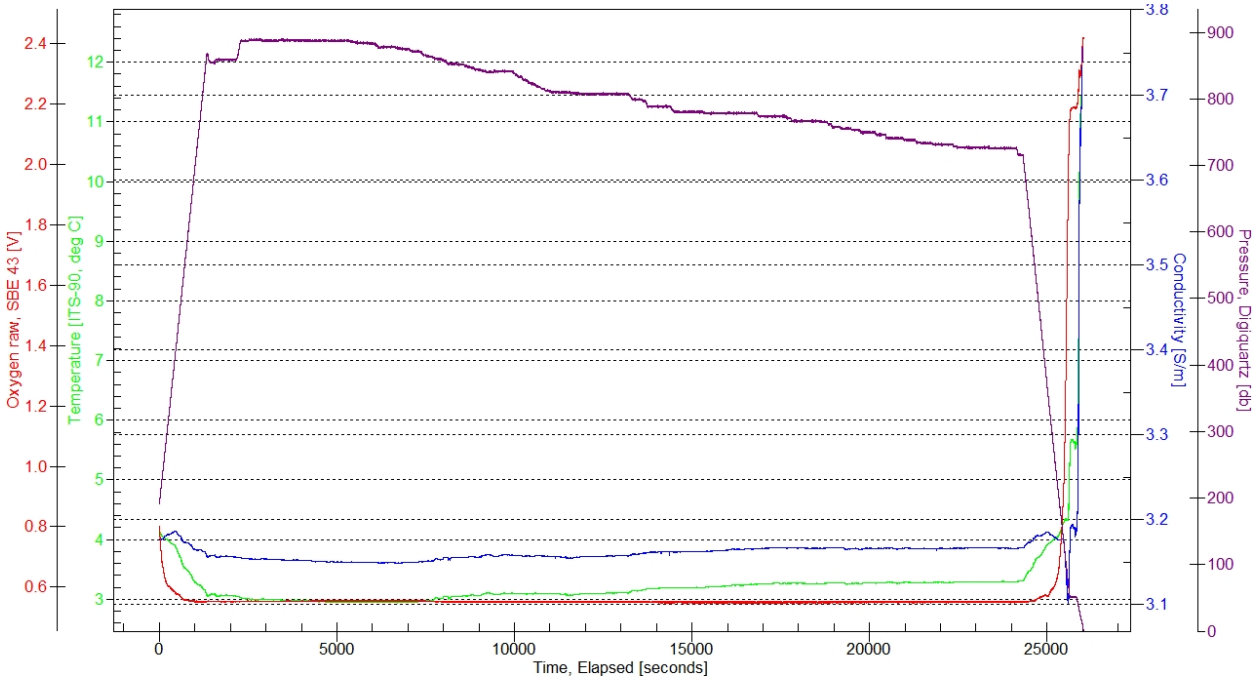
ROV	*Deep Discoverer*
Camera Platform	*Seirios*
ROV Measurements	The following ROV measurements, data streams and equipment are used on each ROV deployment: CTD, depth, scanning sonar, USBL position, altitude, heading, attitude, high-resolution cameras, low resolution cameras, manipulator arms, suction sampler, sample drawers and thrusters. The following row notes if any of these sensors were malfunctioning or not operational
Equipment Malfunctions	Tasman DVL produced erratic data, and Auto XY is not reliable.

Close-Up Map of Main Dive Site



Smoothed ROV dive track in white on 30x30 m cell size bathymetry, 3x vertical exaggeration, depth in meters, 100 meter contours.

ROV CTD Profile

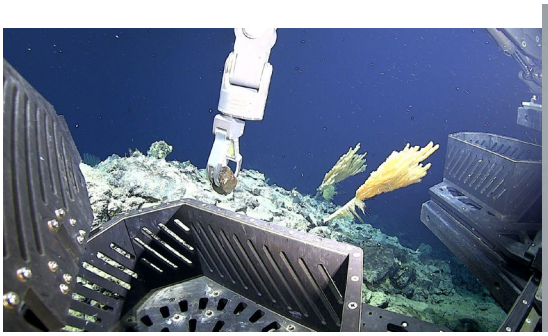


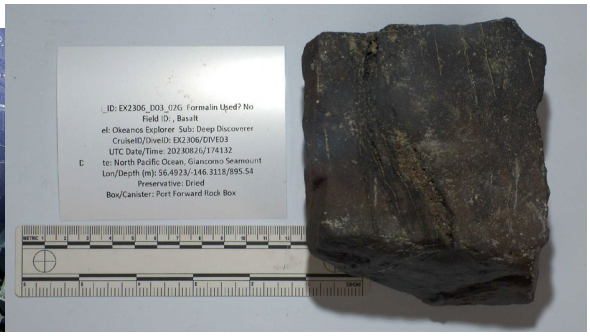
Plot of the ROV CTD profile, showing temperature, conductivity, pressure, and dissolved oxygen over time.

Representative Photos of the Dive

Parastenella sp., Isidella tentaculum, rosselid sponge and an unknown anemone on hard rocky substrate.

Samples Collected

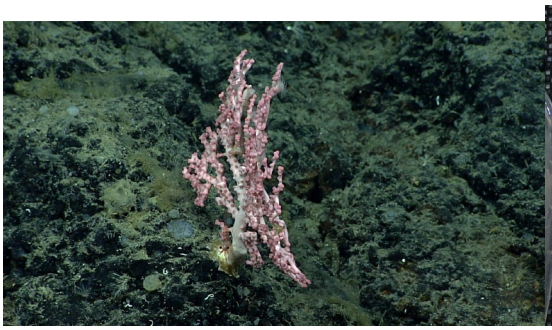




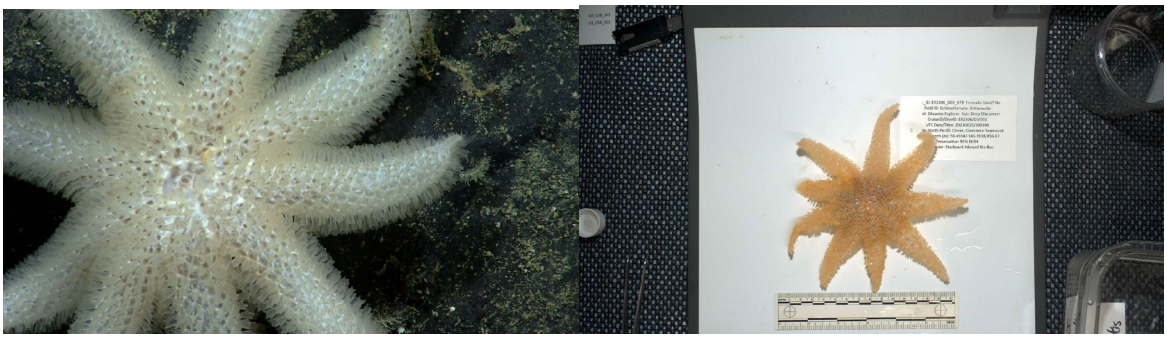
Sample ID	EX2306_D03_02G
Date (UTC)	20230826
Time (UTC)	174132
Depth (m)	895.5
Latitude (decimal degrees)	56.49233
Longitude (decimal degrees)	-146.31180
Temp. (°C)	3.000
Field ID(s)	Basalt
Comments	dark brown aphanitic basalt

Associates Sample ID	Field Identification	Count
EX2306_D03_02G_A01B	Octocorallia	1

Sample ID	EX2306_D03_03B
Date (UTC)	20230826
Time (UTC)	175629
Depth (m)	894.7
Latitude (decimal degrees)	56.49222
Longitude (decimal degrees)	-146.31190
Temp. (°C)	2.979
Field ID(s)	Anthoptilum cf. lithophilim



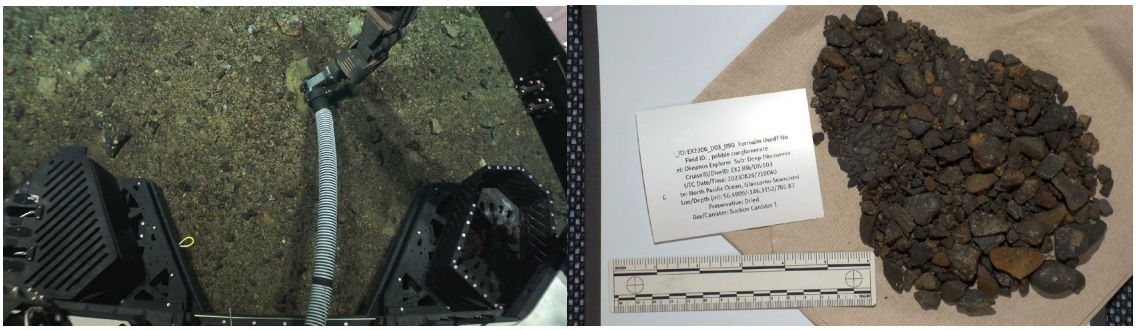
Sample ID	EX2306_D03_05B
Date (UTC)	20230826
Time (UTC)	191657
Depth (m)	849.6
Latitude (decimal degrees)	56.49186
Longitude (decimal degrees)	-146.31310
Temp. (°C)	3.078
Field ID(s)	Coralliidae
Comments	Paragorgia or possibly Sibogagorgia; unidentified paragorgiid, easy to confuse with Hemicorallium spp. in situ



Sample ID	EX2306_D03_07B
Date (UTC)	20230826
Time (UTC)	200149
Depth (m)	816.7
Latitude (decimal degrees)	56.49138
Longitude (decimal degrees)	-146.31380
Temp. (°C)	3.060
Field ID(s)	Asthenactis

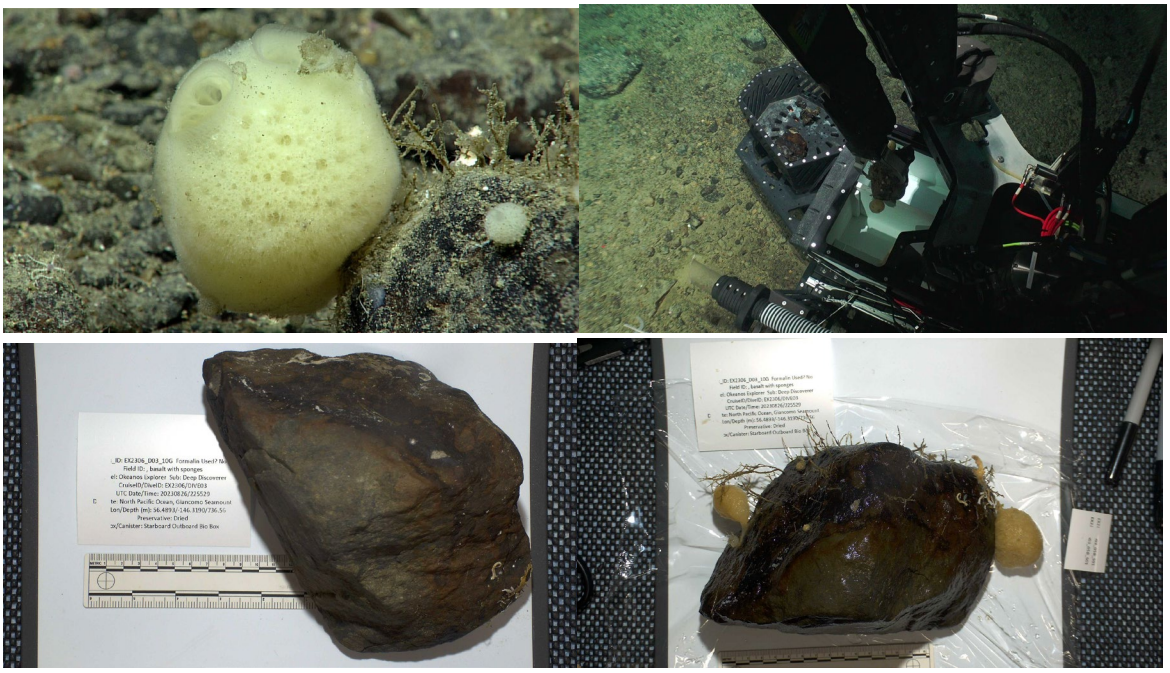
Sample ID	EX2306_D03_08G
Date (UTC)	20230826
Time (UTC)	200525
Depth (m)	816.4
Latitude (decimal degrees)	56.49146
Longitude (decimal degrees)	-146.31400
Temp. (°C)	3.059
Field ID(s)	Basalt
Comments	Dried

Associates Sample ID	Field Identification	Count
EX2306_D03_08G_A01B	Hydroida	1
EX2306_D03_08G_A02B	Serpulidae	1
EX2306_D03_08G_A03B	Porifera	4
EX2306_D03_08G_A04B	Coralliidae	3
EX2306_D03_08G_A04B	Miscellaneous	1



Sample ID	EX2306_D03_09G
Date (UTC)	20230826
Time (UTC)	210040
Depth (m)	786.872
Latitude (decimal degrees)	56.490902
Longitude (decimal degrees)	-146.315188
Temp. (°C)	3.2
Field ID(s)	pebble conglomerate
Comments	coarse sand to cobble-size clasts, mostly dark gray to black with some whitish to reddish-brown clasts

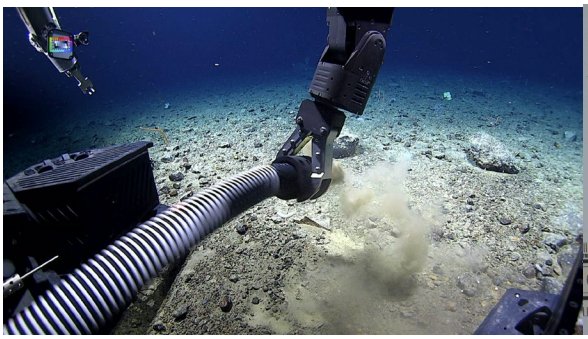
Associates Sample ID	Field Identification	Count
EX2306_D03_09G_A01B	Ophiuroidea	25
EX2306_D03_09G_A02B	Porifera	2
EX2306_D03_09G_A03B	Coralliidae	1
EX2306_D03_09G_A04B	Polychaeta	1



Sample ID	EX2306_D03_10G
Date (UTC)	20230826
Time (UTC)	225529
Depth (m)	736.6
Latitude (decimal degrees)	56.48935
Longitude (decimal degrees)	-146.31900
Temp. (°C)	3.231
Field ID(s)	basalt with sponges
Comments	aphanitic basalt

Associates Sample ID	Field Identification	Count
EX2306_D03_10G_A01B	Bryozoa	1
EX2306_D03_10G_A03B	hydrozoa	1
EX2306_D03_10G_A04B	Porifera	4
EX2306_D03_10G_A05B	Polychaeta	1
EX2306_D03_10G_A06B	Unknown	1

Associates Sample ID	Field Identification	Count
EX2306_D03_10G_A07B	miscellaneous	6



Sample ID	EX2306_D03_11G
Date (UTC)	20230826
Time (UTC)	230339
Depth (m)	736.6
Latitude (decimal degrees)	56.48935
Longitude (decimal degrees)	-146.31890
Temp. (°C)	3.236
Field ID(s)	pebbly sand
Comments	medium sand to pebble-size clasts, mostly dark gray to black

Niskin Sampling Summary

Sample ID	EX2306_D03_01W
Date (UTC)	20230826
Time (UTC)	171516
Depth (m)	894.7
Latitude (decimal degrees)	56.49230
Longitude (decimal degrees)	-146.31180
Bottle Number	NISKIN 1
Temperature (°C)	3.020
Dissolved Oxygen (ml/L)	0.535
Treatment	DNA/RNA Shield

Sample ID	EX2306_D03_04W
Date (UTC)	20230826
Time (UTC)	185539
Depth (m)	858.1
Latitude (decimal degrees)	56.49192
Longitude (decimal degrees)	-146.31270
Bottle Number	NISKIN 2
Temperature (°C)	2.966
Dissolved Oxygen (ml/L)	0.522
Treatment	DNA/RNA Shield

Sample ID	EX2306_D03_06W
Date (UTC)	20230826
Time (UTC)	193800
Depth (m)	1036.5
Latitude (decimal degrees)	56.49160
Longitude (decimal degrees)	-146.31380
Bottle Number	NISKIN 3
Temperature (°C)	2.878
Dissolved Oxygen (ml/L)	0.539
Treatment	DNA/RNA Shield

Sample ID	EX2306_D03_12W
Date (UTC)	20230826
Time (UTC)	233528
Depth (m)	272.2
Latitude (decimal degrees)	56.48911
Longitude (decimal degrees)	-146.31910
Bottle Number	NISKIN 4
Temperature (°C)	4.005
Dissolved Oxygen (ml/L)	0.763
Treatment	DNA/RNA Shield

Scientists Involved

Name	Affiliation
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Emily Ashe	NOAA
Hugh MacIntosh	Royal BC Museum
Jamie Conrad	USGS
John Deitz	Long Island University
Kelly Markello	California Academy of Sciences
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