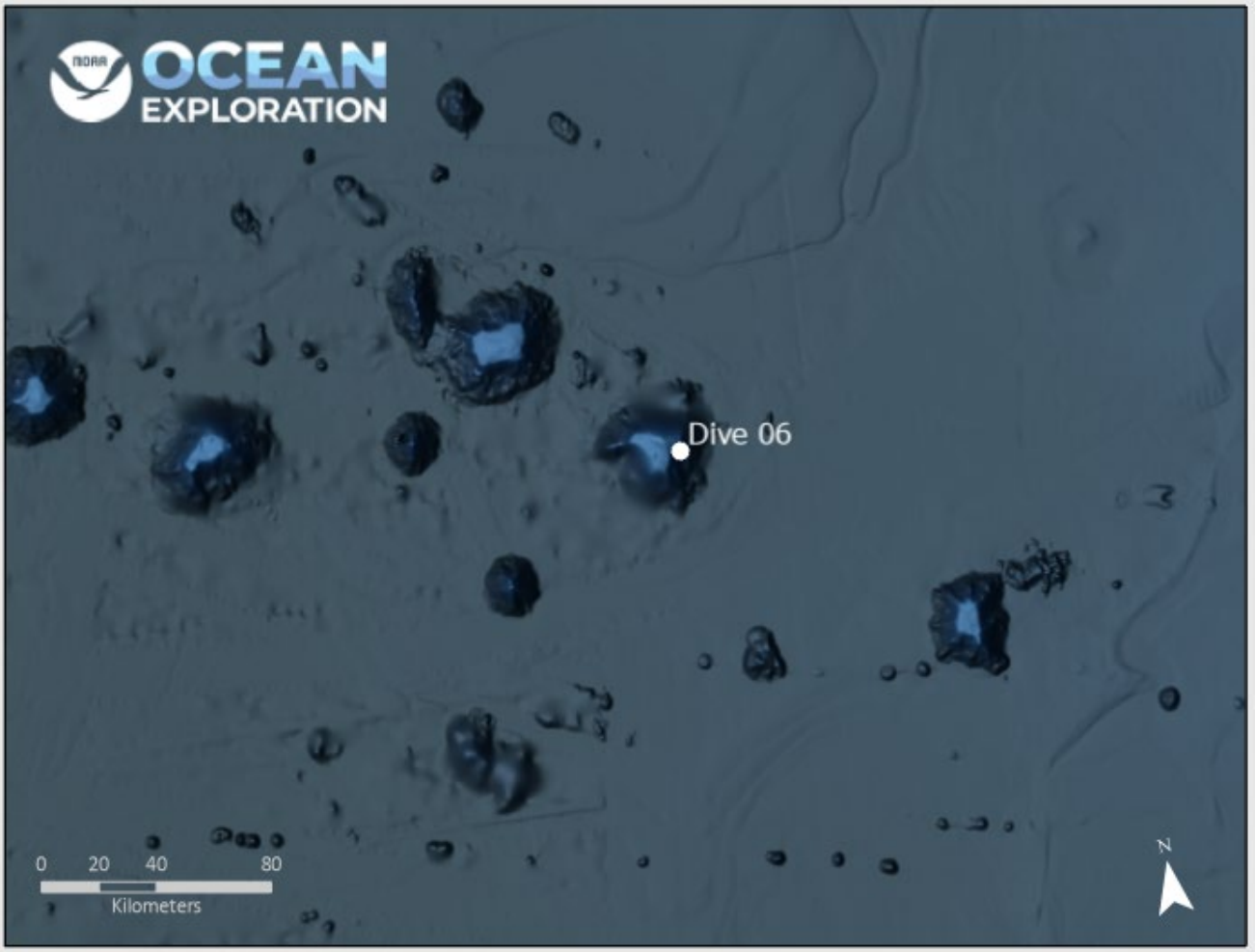
ROV Dive Summary
EX2306, Dive 06, August 29, 2023

General Location Map



Dive Information

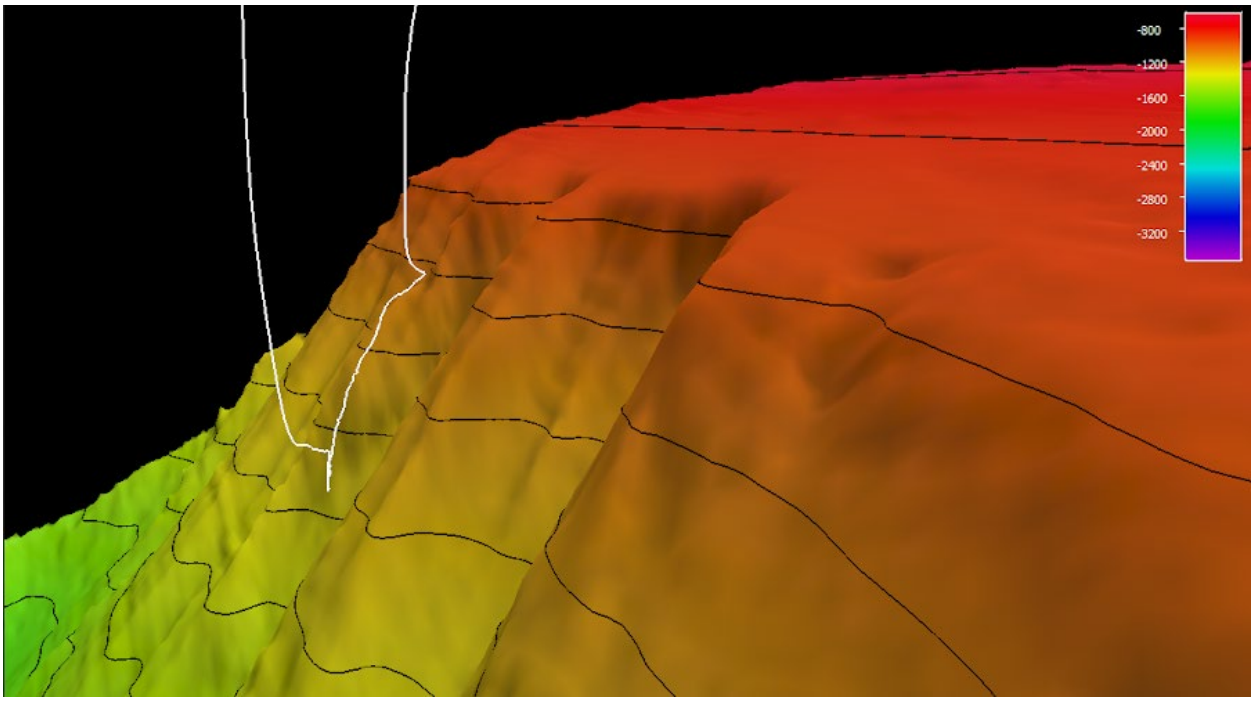
Site Name	Durgin Guyot
General Area Descriptor	Gulf of Alaska
Science Team Leads	Merlin Best (Bio); Jamie Conrad (Geo)
Expedition Coordinator	Sam Candio
ROV Dive Supervisor	Lars Murphy
Dive Purpose	To dive on Durgin Guyot, another of the volcanoes in the Kodiak-Bowie seamount chain that has not been previously explored.
Maritime Heritage Restrictions	No
ROV Dive Summary Data	Dive Type: Normal In Water: 2023-08-29T16:22:29.156720 55.80486030134541 ; -141.744310653436 On Bottom: 2023-08-29T17:26:13.286719 55.80637903771346 ; -141.7461151761939 Off Bottom: 2023-08-30T00:00:33.670568 55.80739631253985 ; -141.75100495820047 Out Water: 2023-08-30T00:37:57.698938 55.808465 ; -141.757026 Dive Duration: 8:15:28 Bottom Time: 6:34:20 Max Vehicle Depth: 1270.6 m Min Seafloor Depth: 1003.0 m Distance Traveled: 421.4 m

Dive Description	***Geology*** The dive on Durgin Guyot started at a depth of about 1250 m on the upper flank of the seamount. The ROV ascended about 270 m up a ridge of basalt flows, in places weathering into bouldery and rubbly slopes, and elsewhere exhibiting beautiful volcanic flow features, with partially collapsed and evacuated lava tubes and lobate flow tongues. Two basalt samples and two samples of pebbly sandstone, one as a by-product (associate) of a biology sample, were collected. ***Biology*** The dive provided observations of a fairly consistent ecosystem, with sparse coral and sponge distribution throughout. Individuals of Antipatharia, Anthomastinae, Primnoidae, Crinoidea, Sebastolobus spp., and Echiura were noted. Perhaps most interesting is what wasn't there - there were hundreds of hollow bases of dead hexactinellids, likely from the family Euretidae, indicating that at one point they dominated the area.
Notable Observations	Stalked Hexactinellida; large Chonelasma cf. oreia, Paragorgia arborea
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 Ledge Outcrop/Rock Outcrop Ridge Seamount Slope Submarine Slide Deposit
SeaTube Link (science annotations)	https://data.oceannetworks.ca/SeaTubeV3?resourceTypeId=600&resourceId=6680

Equipment Deployed

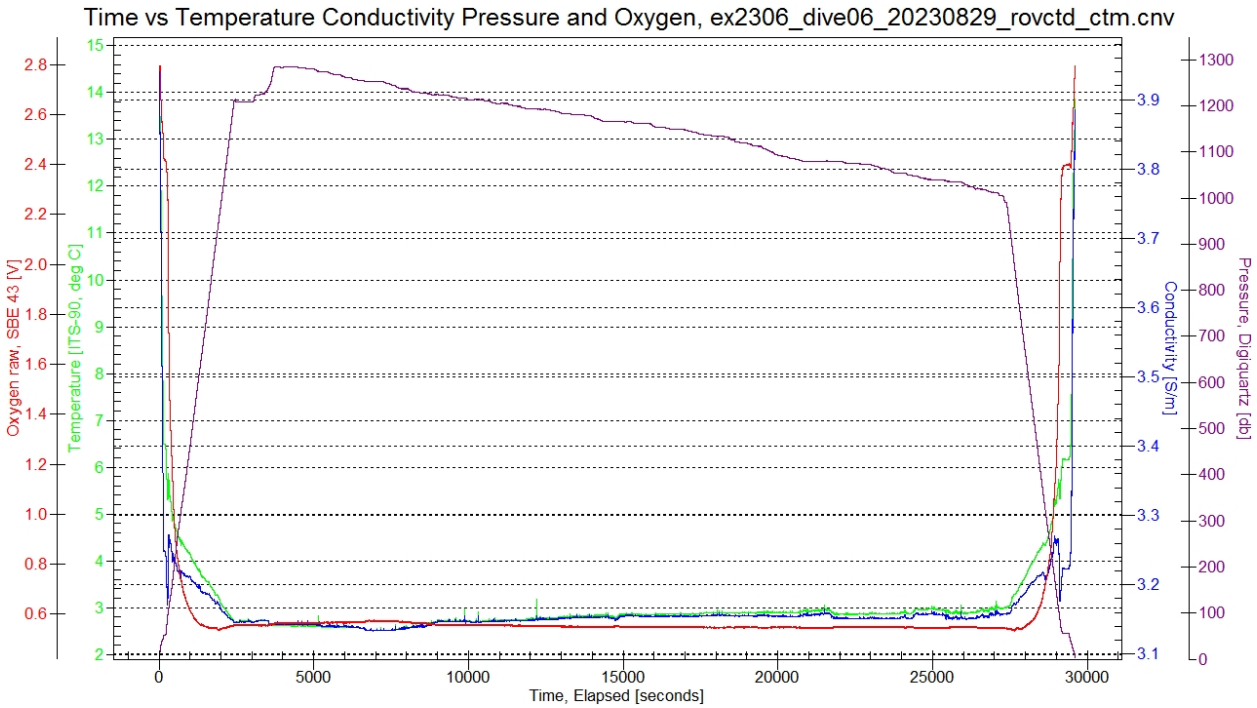
ROV	*Deep Discoverer*
Camera Platform	*Seirios*
ROV Measurements	The following ROV measurements, data streams and equipment are used on each ROV deployment: CTD, depth, scanning sonar, USBL position, altitude, heading, attitude, high-resolution cameras, low resolution cameras, manipulator arms, suction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

Close-Up Map of Main Dive Site



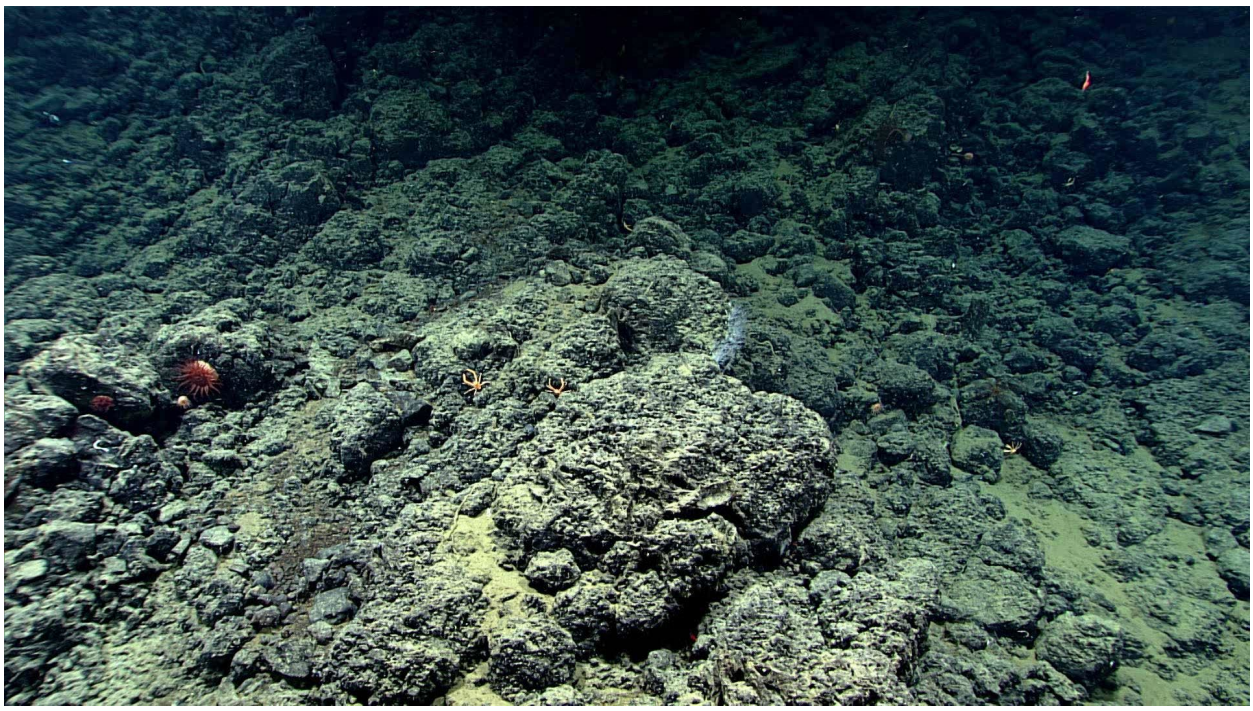
Smoothed ROV dive track in white on 30x30 m cell size bathymetry, 3x vertical exaggeration, depth in meters, 100 meter contours.

Sound Speed Manager Image of ROV CTD Profile



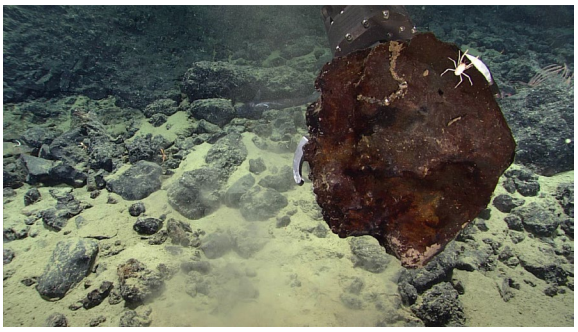
Plot of ROV CTD profile, showing temperature, conductivity, pressure, and dissolved oxygen over time.

Representative Photos of the Dive



Rocky substrate with sparse fauna - unknown anemone, galatheid crabs, and stoloniferous coral

Samples Collected

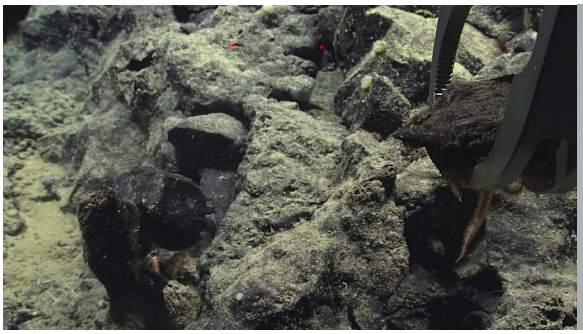


Sample ID	EX2306_D06_02G
Date (UTC)	20230829
Time (UTC)	173557
Depth (m)	1269.52001953125
Latitude (decimal degrees)	55.8063774108887
Longitude (decimal degrees)	-141.746170043945
Temp. (°C)	2.60999989509583
Field ID(s)	basalt

Associates Sample ID:	EX2306_D06_02G_A01B
Field Identification:	Onuphidae
Count:	1

Associates Sample ID:	EX2306_D06_02G_A02B
Field Identification:	Ophiuroidea
Count:	1

Associates Sample ID:	EX2306_D06_02G_A03B
Field Identification:	Porifera
Count:	1



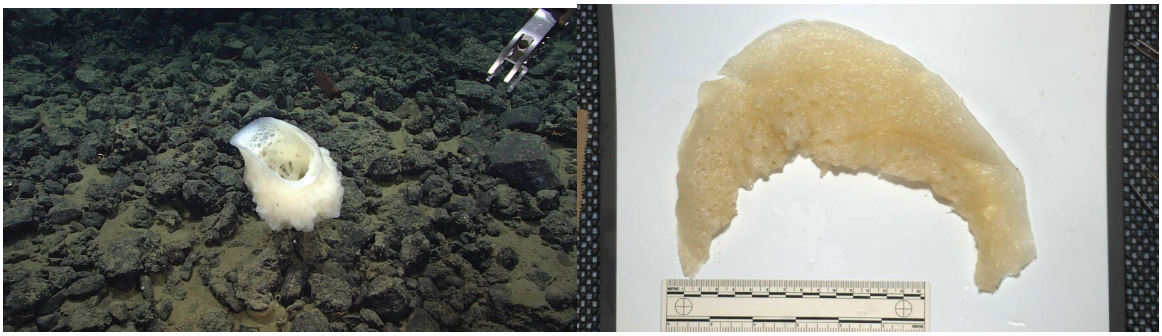
Sample ID	EX2306_D06_03G
Date (UTC)	20230829
Time (UTC)	203344
Depth (m)	1151.4560546875
Latitude (decimal degrees)	55.8064765930176
Longitude (decimal degrees)	-141.747604370117
Temp. (°C)	2.85500001907349
Field ID(s)	basalt 2 pieces

Associates Sample ID:	EX2306_D06_03G_A01B
Field Identification:	Porifera
Count:	1

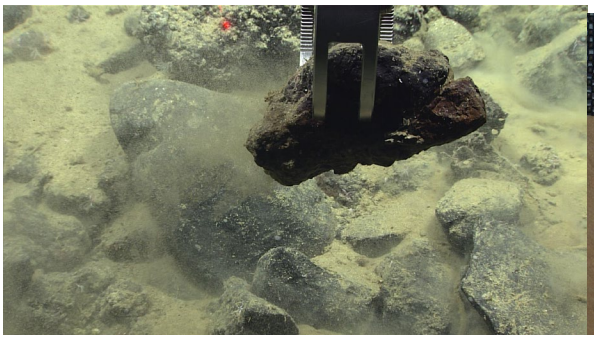
Associates Sample ID:	EX2306_D06_03G_A02B
Field Identification:	PORIFERA

Count:	1

Associates Sample ID:	EX2306_D06_03G_A03B
Field Identification:	Miscellaneous
Count:	1



Sample ID	EX2306_D06_04B
Date (UTC)	20230829
Time (UTC)	221856
Depth (m)	1066.42004394531
Latitude (decimal degrees)	55.8068618774414
Longitude (decimal degrees)	-141.749633789063
Temp. (°C)	2.93899989128113
Field ID(s)	Hexactinellida
Comments	Subsample of a large stalked sponge



Sample ID	EX2306_D06_05G
Date (UTC)	20230829
Time (UTC)	222758
Depth (m)	1067.56896972656
Latitude (decimal degrees)	55.8068542480469
Longitude (decimal degrees)	-141.749633789063
Temp. (°C)	2.86899995803833
Field ID(s)	Pebbly sandstone
Comments	Mislabeled by science leads as 05B. Changed later by data team.

Associates Sample ID:	EX2306_D06_05G_A01B
Field Identification:	Ophiuroidea
Count:	1

Associates Sample ID:	EX2306_D06_05G_A03G
Field Identification:	Fine sand with pebbles
Count:	1

Sample ID	EX2306_D06_06B
Date (UTC)	20230829
Time (UTC)	224318
Depth (m)	1061.89001464844
Latitude (decimal degrees)	55.806827545166
Longitude (decimal degrees)	-141.749786376953
Temp. (°C)	2.86199998855591
Field ID(s)	Limidae
Comments	Label wrongly called it Venerida initially

Associates Sample ID:	EX2306_D06_06B_A01B
Field Identification:	Ampharetidae
Count:	1

Associates Sample ID:	EX2306_D06_06B_A02B
Field Identification:	Ophiuroidea
Count:	1

Associates Sample ID:	EX2306_D06_06B_A03B
Field Identification:	Demospongiae
Count:	1

Associates Sample ID:	EX2306_D06_06B_A04B
Field Identification:	Porifera
Count:	1

Associates Sample ID:	EX2306_D06_06B_A05B
Field Identification:	Hexactinellida
Count:	1

Associates Sample ID:	EX2306_D06_06B_A06B
Field Identification:	Pectinida
Count:	1

Associates Sample ID:	EX2306_D06_06B_A07B
Field Identification:	Polychaeta
Count:	1

Associates Sample ID:	EX2306_D06_06B_A08B
Field Identification:	Miscellaneous
Count:	1

Associates Sample ID:	EX2306_D06_06B_A09G
Field Identification:	Pebbly sand
Count:	N/A

Niskin Sampling Summary

Sample ID	EX2306_D06_01W
Date (UTC)	20230829
Time (UTC)	173407
Depth (m)	1269.68298339844
Latitude (decimal degrees)	55.8063697814941
Longitude (decimal degrees)	-141.746170043945
Bottle Number	Niskin Bottle 1
Temperature	2.60999989509583
Dissolved Oxygen (mg/L)	0.628000020980835
Treatment	DNA/RNA Shield

Sample ID	EX2306_D06_07W
Date (UTC)	20230829
Time (UTC)	231418
Depth (m)	1032.88793945313
Latitude (decimal degrees)	55.8070411682129
Longitude (decimal degrees)	-141.750564575195

Bottle Number	Niskin Bottle 2
Temperature	2.9539999961853
Dissolved Oxygen (mg/L)	0.514999985694885
Treatment	DNA/RNA Shield

Sample ID	EX2306_D06_08W
Date (UTC)	20230830
Time (UTC)	001757
Depth (m)	442.773986816406
Latitude (decimal degrees)	55.808349609375
Longitude (decimal degrees)	-141.752334594727
Bottle Number	Niskin Bottle 3
Temperature	4.18900012969971
Dissolved Oxygen (mg/L)	0.799000024795532
Treatment	DNA/RNA Shield

Scientists Involved

Name	Affiliation
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