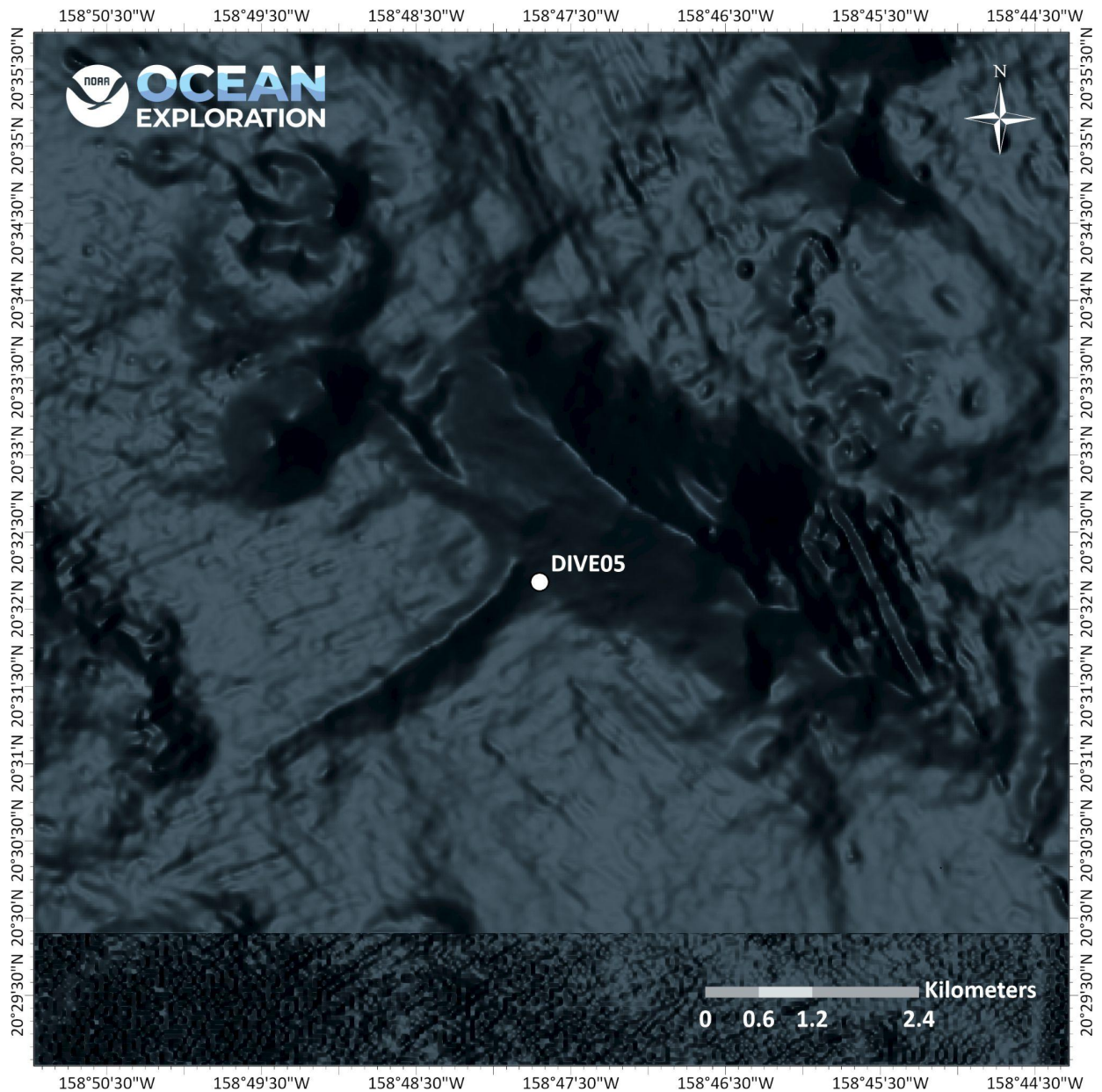


ROV Dive Summary

EX2502, Dive 05, March 23, 2025

General Location Map



Dive Information

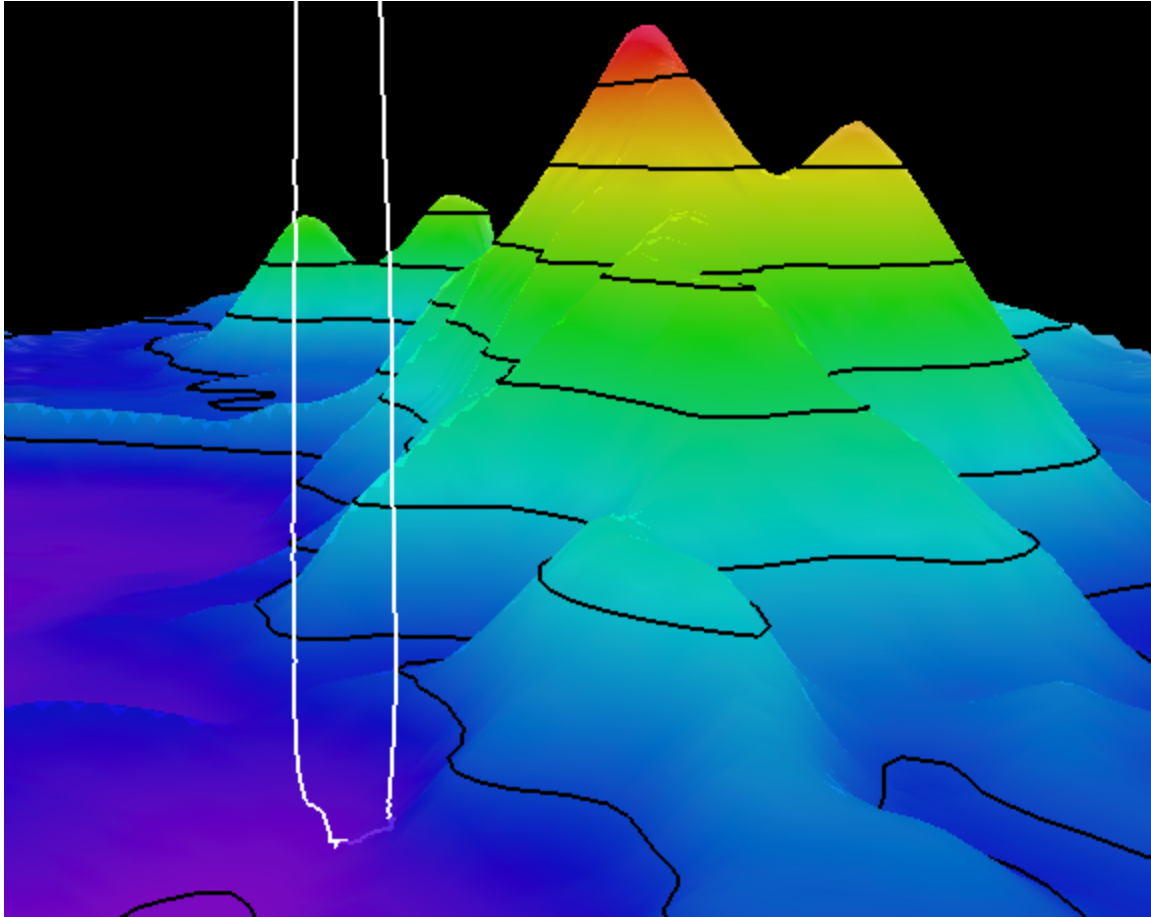
Site Name	Deep Squeeze
General Area Descriptor	Hawaiian Islands
Science Team Leads	Trish Albano, Caitlin Ruby, Jennifer Green, Sahara Rios-Bonilla
Expedition Coordinator	Shannon Hoy
ROV Dive Supervisor	Chris Ritter
Dive Purpose	Conduct shakedown engineering objectives
Maritime Heritage Restrictions	No
ROV Dive Summary Data	Dive Type: Normal In Water: 2025-03-23T19:07:35.911975 20.52163866538013 ; -158.76570984989584 On Bottom: 2025-03-23T21:40:29.589920 20.521040879410094 ; -158.7645118794101 Off Bottom: 2025-03-24T02:04:00.000000 20.52252647025169 ; -158.7638195113272 Out Water: 2025-03-24T02:30:48.477712 20.521158 ; -158.763349 Dive Duration: 7:23:12 Bottom Time: 4:23:30 Max Vehicle Depth: 4194.2 m Min Seafloor Depth: 4171.9 m Distance Travelled: 207.4 m Mid Water Transects Summary ^^ Number of Transects: 2 Transect 1 Start: 00:06:40 20.522238992191213 ; -158.763595355391 End: 00:15:07 20.52247873338449 ; -158.76337811526108 Duration: 0:08:27 Depth: 3003.0 m Transect 2 Start: 01:38:00 20.522430364960204 ; -158.76356336253315 End: 02:03:00 20.522496482238488 ; -158.7636952662343 Duration: 0:25:00 Depth: 671.0 m

Dive Description	Dive 05 was a successful engineering dive focused on ensuring the vehicles operated normally at depth (4200 m), and included practicing midwater transects (including piloting, videography, and sampling). Two physical samples were collected: one biological and one geological. Five water samples were collected and processed for eDNA.
Notable Observations	Benthic + Water Column Transects. Benthic area sparsely populated, observations included: small octocoral, sponges, anemone, and echinoderms. Substrate started off flat with Fine Unconsolidated Substrate (CMECS); while the sloped portion was Course Unconsolidated Substrate (CMECS).
Community and Habitat Observations	Corals and Sponges — Present Chemosynthetic Community — Absent High biodiversity Community — Absent Active Seep or Vent — Absent Extinct Seep or Vent — Absent Hydrates — Absent
CMECS Feature Type(s)	Flat, then Slope
SeaTube Link (science annotations)	https://data.oceannetworks.ca/app/dive-logs/20700

Equipment Deployed

ROV	<i>Deep Discoverer</i>
Camera Platform	<i>Seirios</i>
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.
Equipment Malfunctions	Niskin Bottle #3 failed to close.

Close-Up Map of Main Dive Site

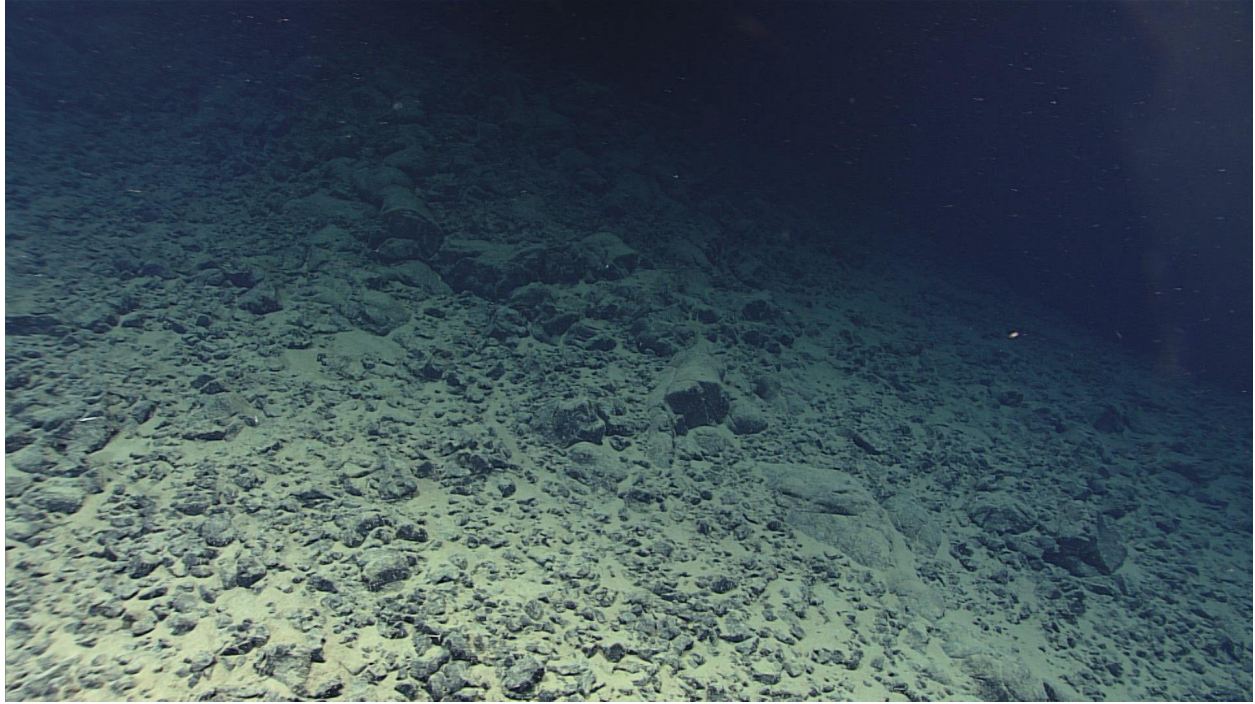


Smoothed ROV dive track in white on 61x61 cell size bathymetry, 3x vertical exaggeration, depth in meters, 100 meter contours.

Representative Photos of the Dive



Holothurian spp. on seafloor.



Rubble field



Sea urchin on seafloor.

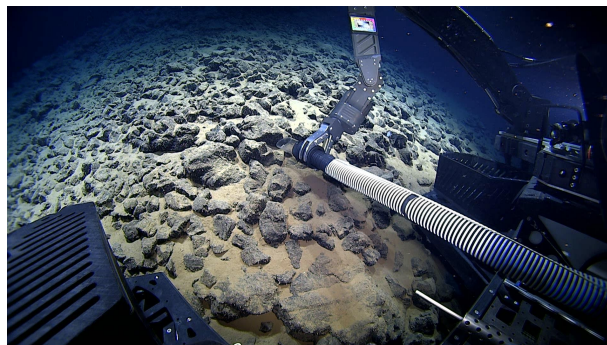
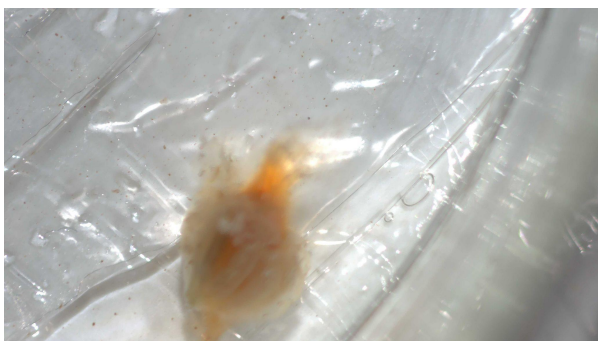
Samples Collected



Sample ID	EX2502_D05_02G
Date (UTC)	20250323
Time (UTC)	224629
Depth (m)	4178.5830078125

Latitude (decimal degrees)	20.5223236083984
Longitude (decimal degrees)	-158.763641357422
Temp. (°C)	1.46399998664856
Field ID(s)	4177m
Comments	Igneous, black, basalt. Small iron deposits. Roughly 19cm x 15cm x 13cm in size.

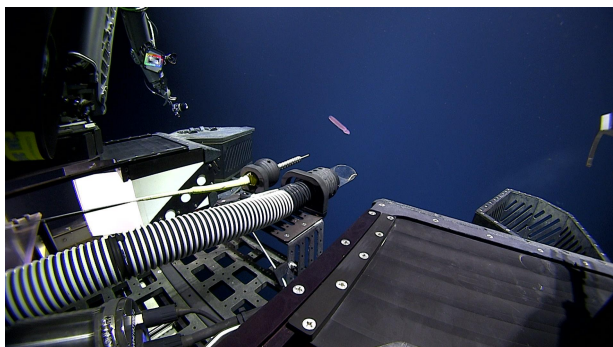
Associates Sample ID:	N/A
Field Identification:	N/A
Count:	N/A



Sample ID	EX2502_D05_04B
Date (UTC)	20250323
Time (UTC)	230501
Depth (m)	4172.0517578125
Latitude (decimal degrees)	20.5221195220947
Longitude (decimal degrees)	-158.763748168945
Temp. (°C)	1.46200001239777
Field ID(s)	Solmissus

Comments	Gelatinous 1cm in diameter. Clear & brownish orange in color. Specimen partially deteriorated upon surface collection.
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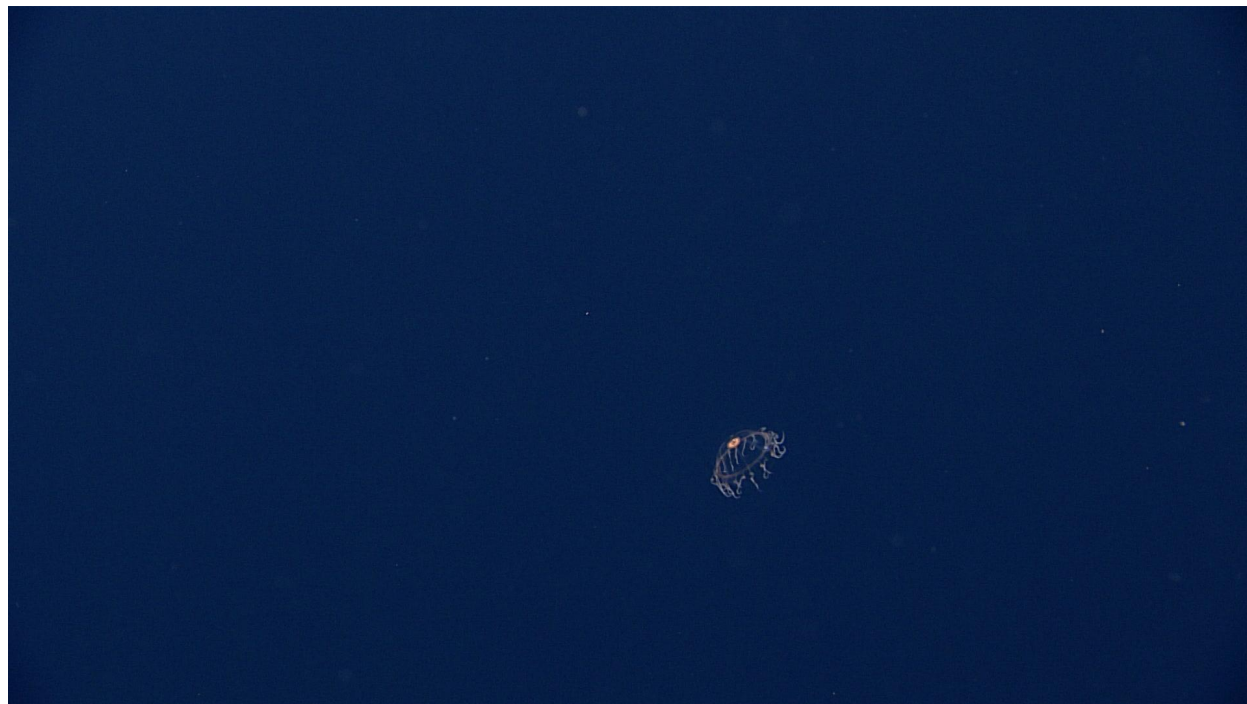
Associates Sample ID:	N/A
Field Identification:	N/A
Count:	N/A



Sample ID	EX2502_D05_07B
Date (UTC)	20250324
Time (UTC)	014204
Depth (m)	671.505981445313
Latitude (decimal degrees)	20.5224914550781
Longitude (decimal degrees)	-158.763610839844
Temp. (°C)	5.6710000038147
Field ID(s)	Pyrosoma
Comments	Mostly clear, gelatinous with pink-red dots throughout. Structurally firm.

Associates Sample ID:	N/A
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Field Identification:	N/A
Count:	N/A



Sample ID	EX2502_D05_08B
Date (UTC)	20250324
Time (UTC)	014908
Depth (m)	671.658996582031
Latitude (decimal degrees)	20.5224990844727
Longitude (decimal degrees)	-158.763626098633
Temp. (°C)	5.63899993896484
Field ID(s)	unknown jellyfish
Comments	Specimen lost during ascent before surface collection.

Niskin Sampling Summary

Sample ID	EX2502_D05_01W
Date (UTC)	20250323
Time (UTC)	214849
Depth (m)	4191.01806640625
Latitude (decimal degrees)	20.5212802886963
Longitude (decimal degrees)	-158.764541625977
Bottle Number	Niskin Bottle 1
Temperature	1.4650000333786
Dissolved Oxygen (mg/L)	4.68599987030029
Treatment	DNA/RNA Shield

Sample ID	EX2502_D05_03W
Date (UTC)	20250323
Time (UTC)	225018
Depth (m)	4177.82177734375
Latitude (decimal degrees)	20.5220527648926
Longitude (decimal degrees)	-158.763641357422
Bottle Number	Niskin Bottle 2
Temperature	1.4650000333786
Dissolved Oxygen (mg/L)	4.75
Treatment	DNA/RNA Shield

Sample ID	EX2502_D05_05W
Date (UTC)	20250323
Time (UTC)	230802
Depth (m)	4169.86181640625
Latitude (decimal degrees)	20.5220489501953
Longitude (decimal degrees)	-158.763671875
Bottle Number	Niskin Bottle 4
Temperature	1.46300005912781
Dissolved Oxygen (mg/L)	4.73899984359741
Treatment	DNA/RNA Shield

Sample ID	EX2502_D05_06W
Date (UTC)	20250323
Time (UTC)	235643
Depth (m)	3003.14111328125
Latitude (decimal degrees)	20.5218601226807
Longitude (decimal degrees)	-158.764068603516
Bottle Number	Niskin Bottle 5
Temperature	1.54999995231628
Dissolved Oxygen (mg/L)	3.95900011062622
Treatment	DNA/RNA Shield

Direct inquiries to:

NOAA Ocean Exploration

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