ROV Dive Summary
EX2502, Dive 01, March 19, 2025

General Location Map

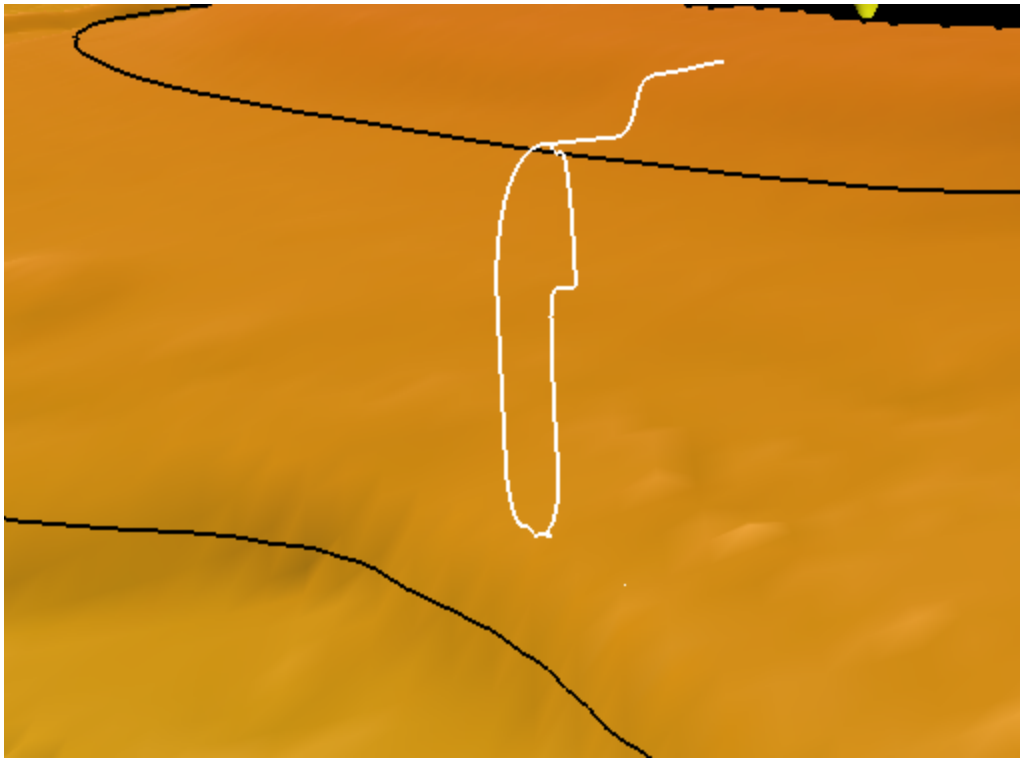
Dive Information

Site Name	Lānaʻi
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: 2025-03-19T23:06:40.459941 20.81959677496943 ; -157.06485019105375 On Bottom: 2025-03-19T23:47:42.435370 20.82076559901909 ; -157.065078 Off Bottom: 2025-03-20T02:03:29.705229 20.821094988279448 ; -157.06606147069863 Out Water: 2025-03-20T02:34:13.898051 20.82403510649231 ; -157.06275334703412 Dive Duration: 3:27:33 Bottom Time: 2:15:47 Max Vehicle Depth: 422.1 m Min Seafloor Depth: 401.0 m Distance Travelled: 127.5 m
Dive Description	This was an engineering dive as part of the 2025 ROV Shakedown. ROV pilots and video engineers conducted system tests on a ~430m flat area southwest of Lānaʻi Island.
Notable Observations	igneous rock formations echinoderms - sea stars and urchins benthic ctenophores scorpaenidae (scorpion fishes)
Community and Habitat Observations	Corals and Sponges — Absent Chemosynthetic Community — Absent High biodiversity Community — Absent Active Seep or Vent — Absent Extinct Seep or Vent — Absent Hydrates — Absent
CMECS Feature Type(s)	Boulder Field
SeaTube Link (science annotations)	https://data.oceannetworks.ca/app/dive-logs/20100

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.
Equipment Malfunctions	

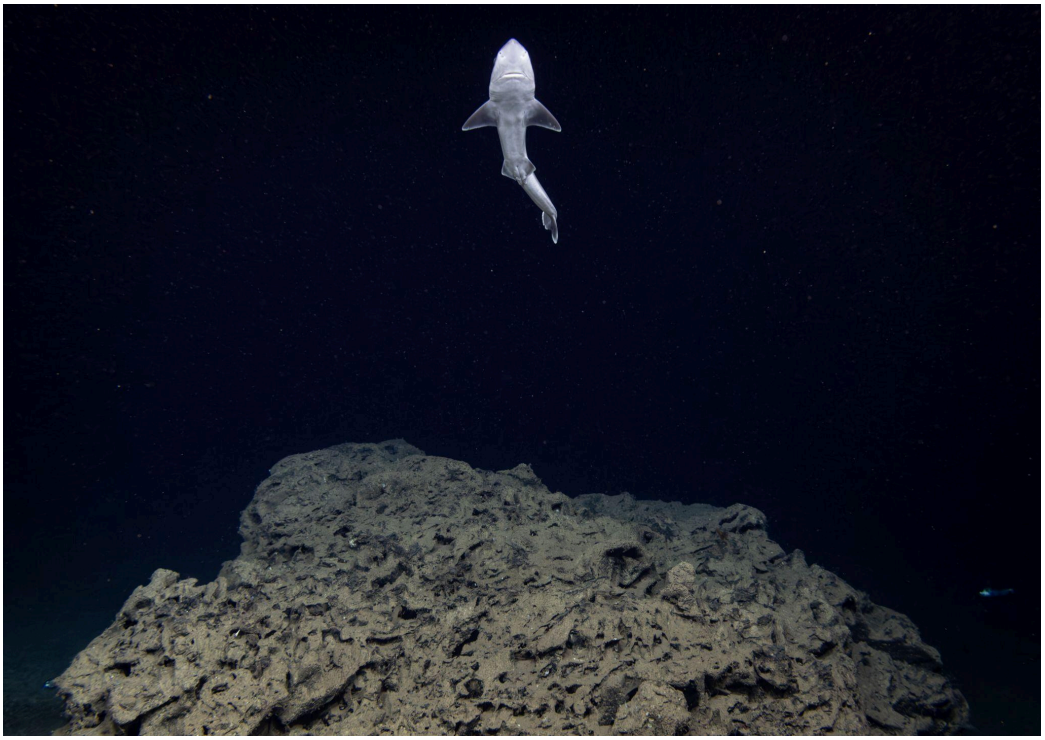
Close-Up Map of Main Dive Site



Smoothed ROV dive track in white on 50x50 cell size bathymetry, 3x vertical exaggeration, depth in meters, 100 meter contours.

Representative Photos of the Dive

Benthic ctenophore



Hawaiian spurdog, *Squalus hawaiiensis*

Aloha grenadier, *Nezumia propinqua*

Samples Collected

Niskin Sampling Summary

Sample ID	EX2502_D01_01W
Date (UTC)	20250319
Time (UTC)	232829
Depth (m)	176.429000854492
Latitude (decimal degrees)	20.8207321166992
Longitude (decimal degrees)	-157.064376831055
Bottle Number	Niskin Bottle 1
Temperature	19.5419998168945
Dissolved Oxygen (mg/L)	6.19399976730347

Treatment	DNA/RNA Shield

Sample ID	EX2502_D01_02W
Date (UTC)	20250320
Time (UTC)	021252
Depth (m)	131.757995605469
Latitude (decimal degrees)	20.8210926055908
Longitude (decimal degrees)	-157.066040039063
Bottle Number	Niskin Bottle 1
Temperature	21.5300006866455
Dissolved Oxygen (mg/L)	6.23799991607666
Treatment	DNA/RNA Shield

Sample ID	EX2502_D01_03W
Date (UTC)	20250320
Time (UTC)	021312
Depth (m)	122.018997192383
Latitude (decimal degrees)	20.8210945129395
Longitude (decimal degrees)	-157.066009521484
Bottle Number	Niskin Bottle 1
Temperature	22.443000793457
Dissolved Oxygen (mg/L)	6.36999988555908
Treatment	DNA/RNA Shield

Sample ID	EX2502_D01_04W
Date (UTC)	20250320
Time (UTC)	021329
Depth (m)	115.685997009277
Latitude (decimal degrees)	20.8211097717285
Longitude (decimal degrees)	-157.065979003906
Bottle Number	Niskin Bottle 1
Temperature	23.003999710083
Dissolved Oxygen (mg/L)	6.42799997329712
Treatment	DNA/RNA Shield

Sample ID	EX2502_D01_05W
Date (UTC)	20250320
Time (UTC)	021345
Depth (m)	106.547996520996
Latitude (decimal degrees)	20.8211269378662
Longitude (decimal degrees)	-157.065948486328
Bottle Number	Niskin Bottle 1
Temperature	23.2019996643066
Dissolved Oxygen (mg/L)	6.46400022506714
Treatment	DNA/RNA Shield

Direct inquiries to:

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