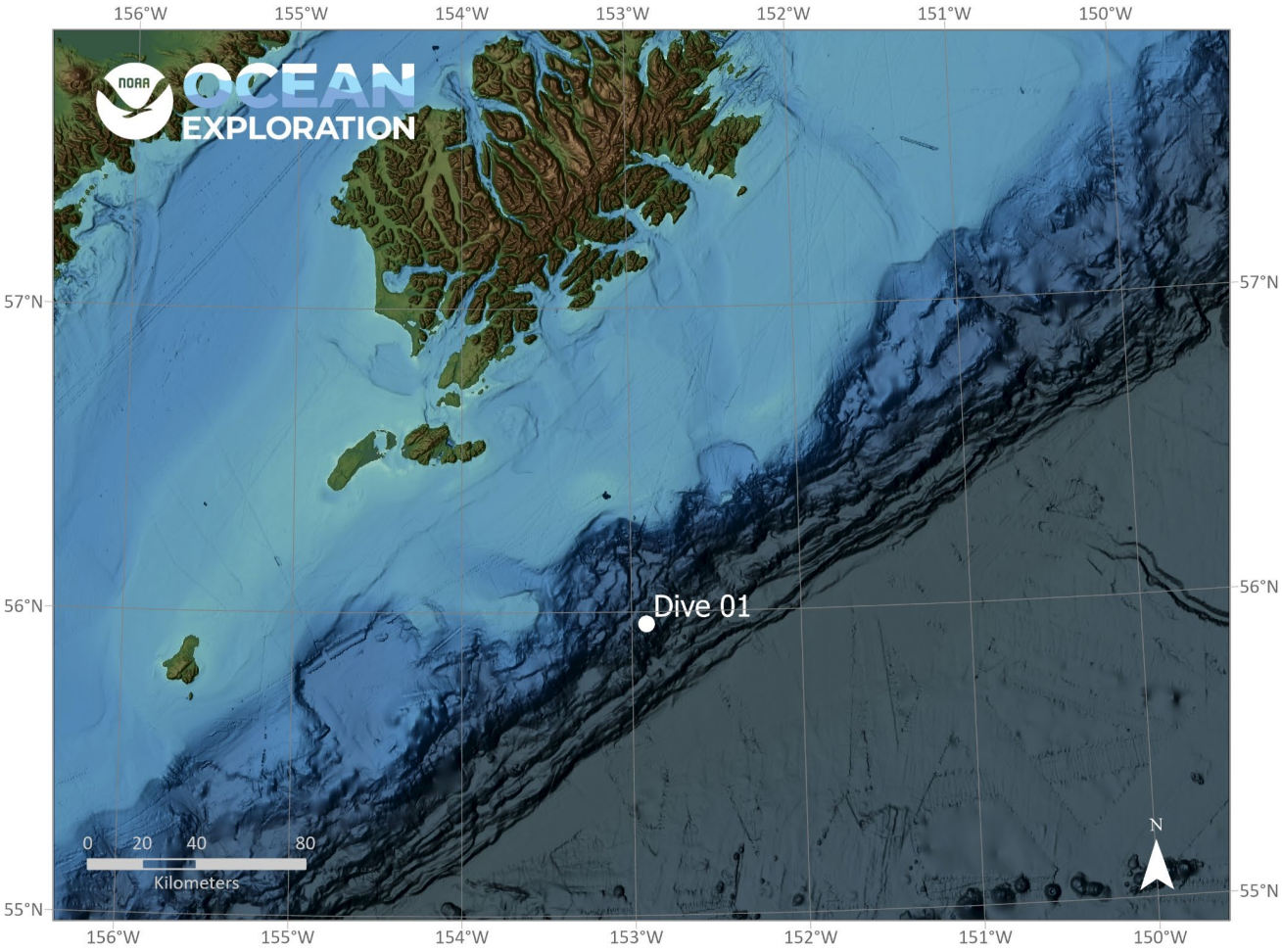
ROV Dive Summary
EX2306, Dive 01, August 24, 2023

General Location Map



Dive Information

Site Name	Kodiak Slope
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	Investigate potential landslide deposits on the slope off of Kodiak.
Maritime Heritage Restrictions	No
ROV Dive Summary Data	Dive Type: Normal In Water: 2023-08-24T16:38:51.084524 55.93337202320095 ; -152.91158066343007 On Bottom: 2023-08-24T18:31:05.357473 55.93053760704952 ; -152.9185044290692 Off Bottom: 2023-08-24T23:04:03.434403 55.92807030470117 ; -152.9194270616821 Out Water: 2023-08-25T00:35:24.790442 55.924078 ; -152.923419 Dive Duration: 7:56:33 Bottom Time: 4:32:58 Max Vehicle Depth: 3099.2 m Min Seafloor Depth: 2909.8 m Distance Traveled: 395.2 m

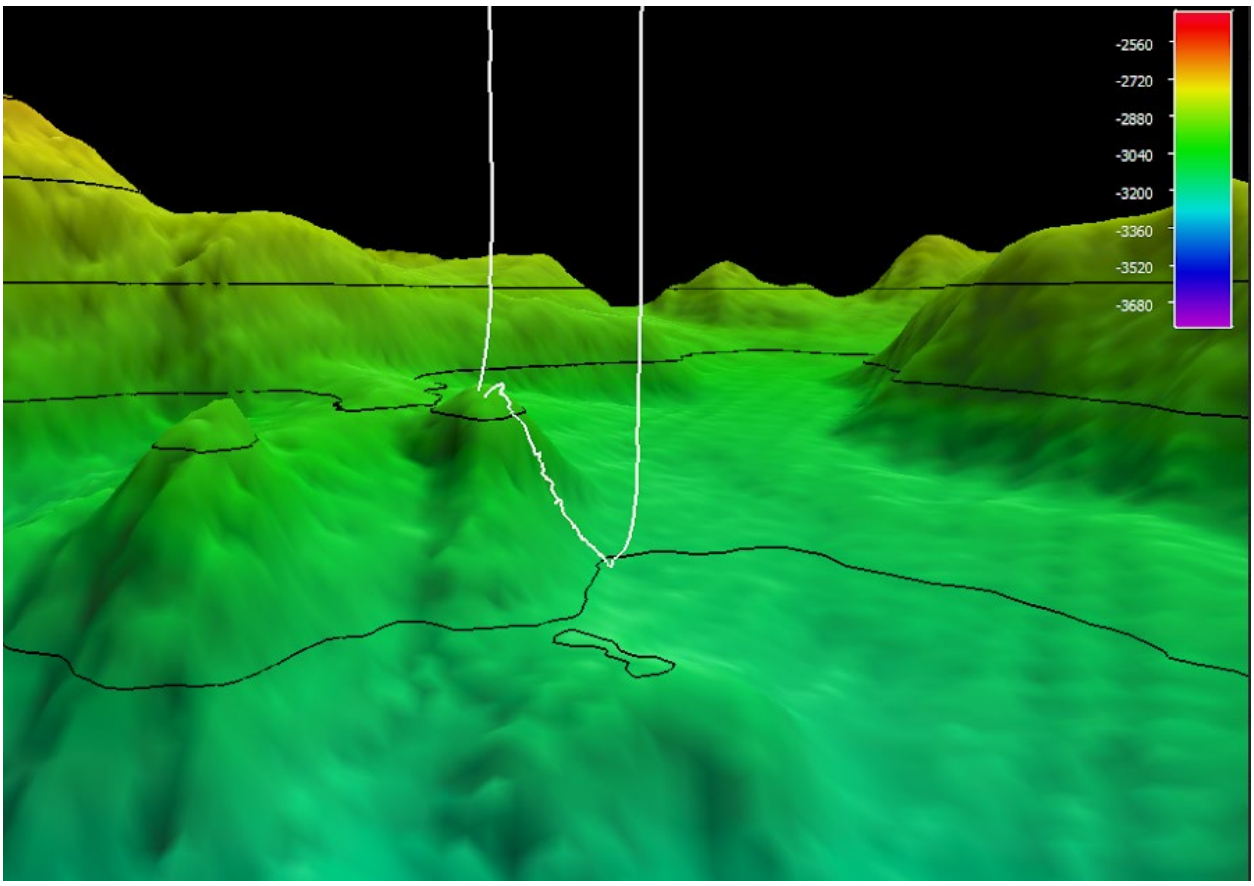
Dive Description	***Geology*** Encountered outcrops of fractured, mostly soft and friable mudstone that was exposed in subdued, scattered outcrops up to several meters across surrounded by unconsolidated seafloor mud. The appearance of the mudstone was consistent with the idea that this area was part of a large submarine landslide, as it appears to be in bathymetric data, but probably older than one associated with any historic earthquakes. ***Biology*** There was a wide variety of interesting biological communities associated with some scattered rocky outcrops, notably Keratoisididae, antipatharians, Cladorhizidae, Caulophacus sp., and Crinoidea. The soft sediment hosted a variety of interesting and rare taxa including Enteropneusta, holothurians, Ecinoidea, and pennatulaceans. A variety of biological samples were targeted for further study.
Notable Observations	Cladorhiza corona, cf. Cystechinus loveni (a rare sea urchin that covers its test in debris), and Kophobelemnon sp. (an unusual sea pen with very little in situ imagery known).
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)	Outcrop/Rock Outcrop Slope Mound Submarine Slide Deposit
SeaTube Link (science annotations)	https://data.oceannetworks.ca/SeaTubeV3?resourceTypeId=600&resourceId=2883

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.

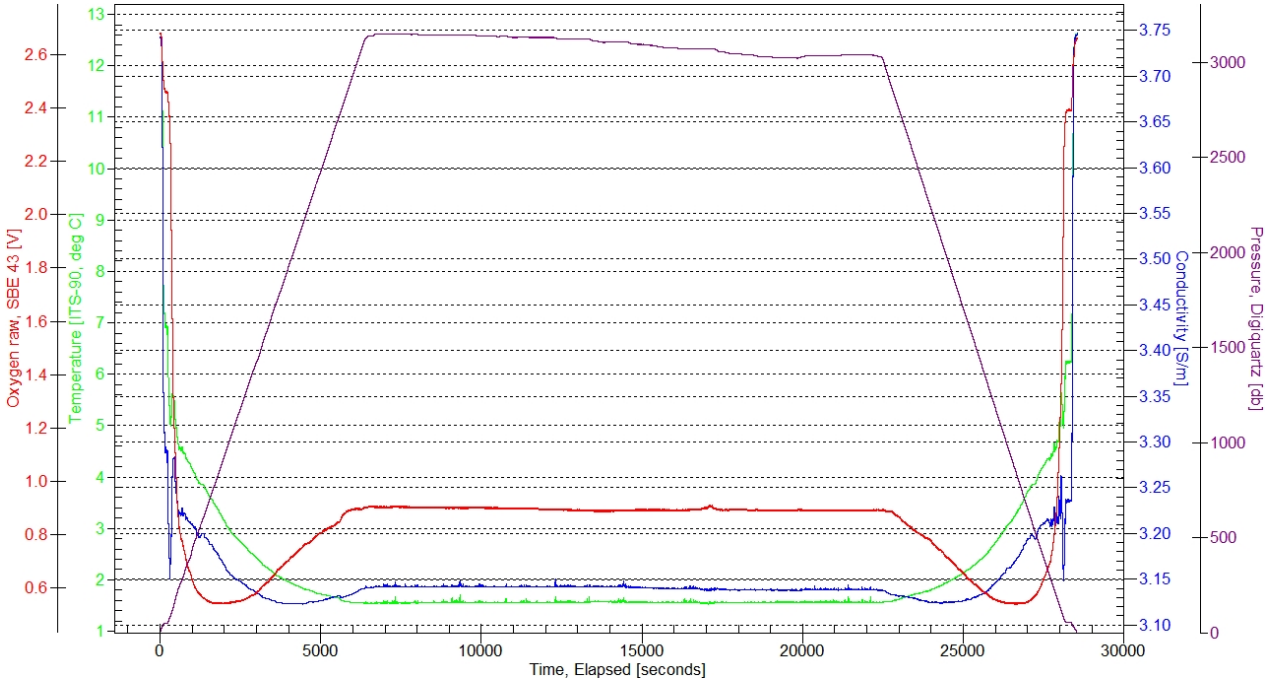
Equipment Malfunctions	None

Close-Up Map of Main Dive Site



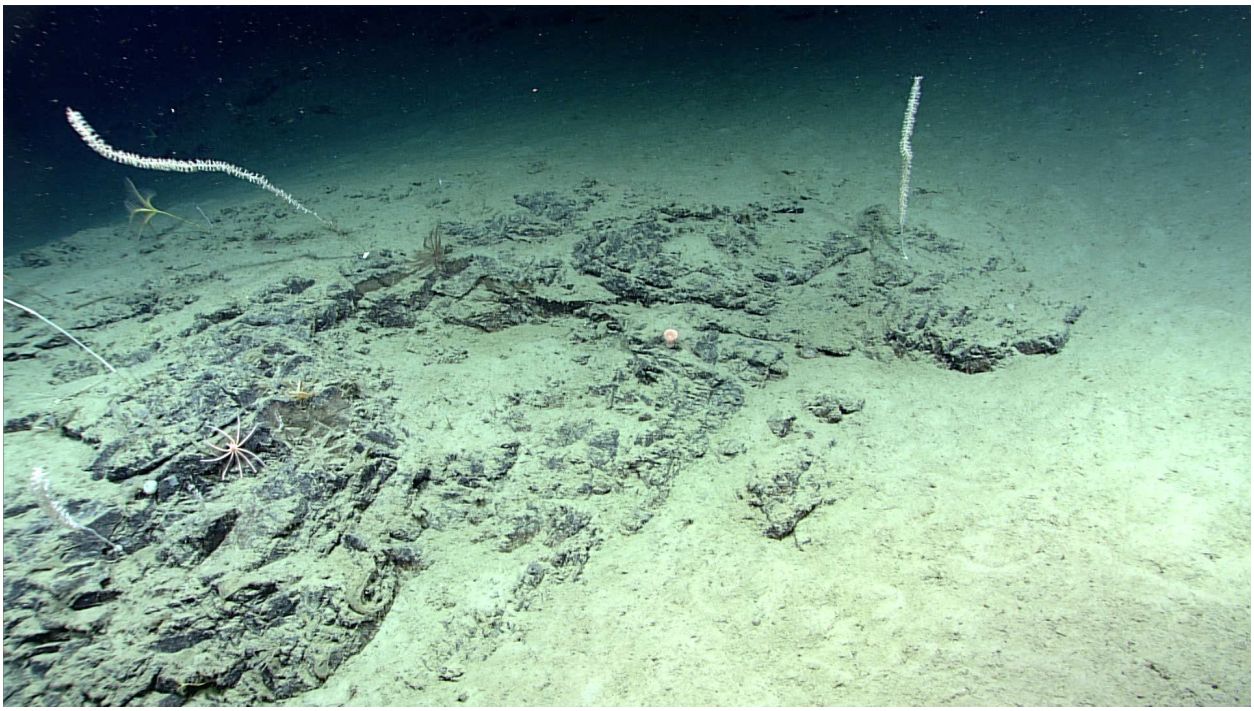
Smoothed ROV dive track in white on 30x30 m cell size bathymetry, 3x vertical exaggeration, depth in meters, 100 meter contours.

ROV CTD Profile



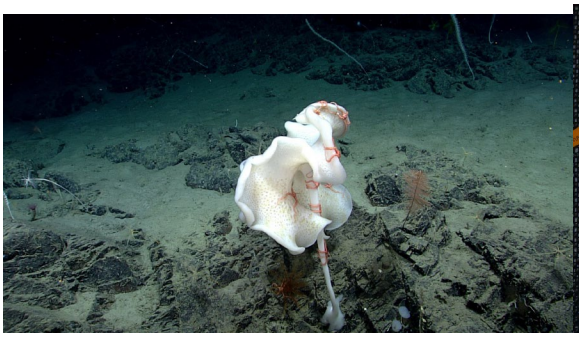
Plot of ROV CTD profile, showing temperature, conductivity, pressure, and dissolved oxygen over time.

Representative Photos of the Dive



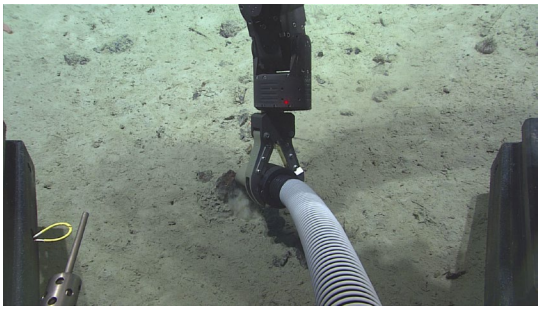
Unbranched keratoisidid corals, anemones, a stalked crinoid, and brisingid on a rocky outcrop.

Samples Collected



Sample ID	EX2306_D01_01B
Date (UTC)	20230824
Time (UTC)	191213
Depth (m)	3092.3
Latitude (decimal degrees)	55.93034
Longitude (decimal degrees)	-152.91850
Temp. (°C)	1.570
Field ID(s)	Caulophacus sp.

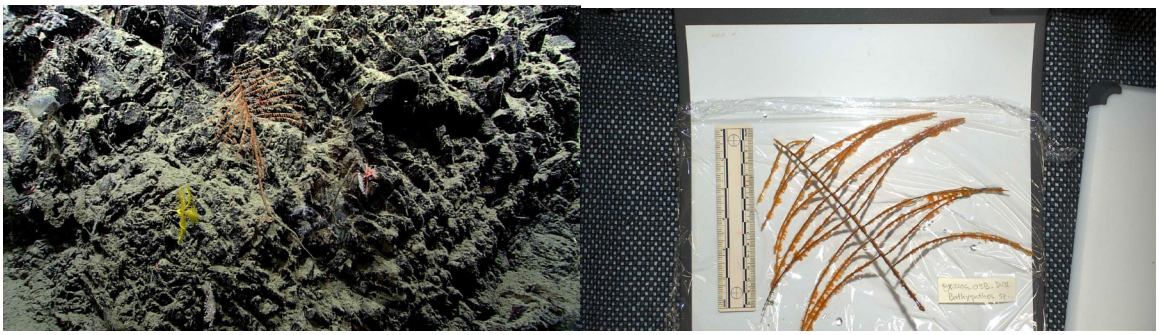
Associates Sample ID	Field Identification	Count
EX2306_D01_01B_A01B	Ophiuroidea	1



Sample ID	EX2306_D01_02G
Date (UTC)	20230824
Time (UTC)	200001
Depth (m)	3079.5
Latitude (decimal degrees)	55.92992
Longitude (decimal degrees)	-152.91870
Temp. (°C)	1.561
Field ID(s)	Siltstone
Comments	Greenish gray siltstone with brown-black staining on weathered surfaces and joints. Well lithified but brittle.

Associates Sample ID	Field Identification	Count
EX2306_D01_02G_A01B	Ophiuroidea	1

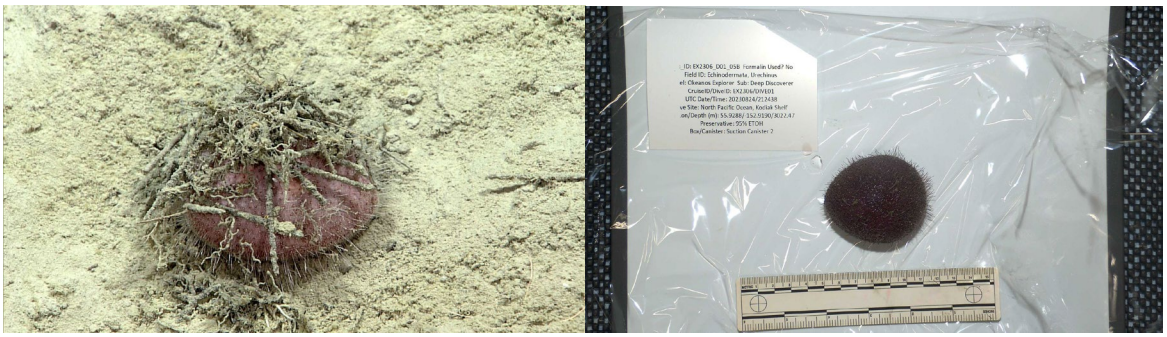
Associates Sample ID	Field Identification	Count
EX2306_D01_02G_A02B	Amphipoda	1



Sample ID	EX2306_D01_03B
Date (UTC)	20230824
Time (UTC)	202126
Depth (m)	3072.5

Latitude (decimal degrees)	55.92986
Longitude (decimal degrees)	-152.91870
Temp. (°C)	1.567
Field ID(s)	Bathypathes sp.

Sample ID	EX2306_D01_04B
Date (UTC)	20230824
Time (UTC)	200000
Depth (m)	3056.3
Latitude (decimal degrees)	55.92959
Longitude (decimal degrees)	-152.91910
Temp. (°C)	1.569
Field ID(s)	Kophoblemnon sp.



Sample ID	EX2306_D01_05B
Date (UTC)	20230824
Time (UTC)	212438
Depth (m)	3022.5
Latitude (decimal degrees)	55.92881
Longitude (decimal degrees)	-152.91900
Temp. (°C)	1.538
Field ID(s)	Urechinus sp.
Comments	Some of the associated debris stacked on the test of this specimen was also retained.

Associates Sample ID	Field Identification	Count
EX2306_D01_05B_A01B	Amphipoda	1

Sample ID	EX2306_D01_10G
Date (UTC)	20230824
Time (UTC)	200000
Depth (m)	3079.5
Latitude (decimal degrees)	55.92992
Longitude (decimal degrees)	-152.91870
Temp. (°C)	1.561
Field ID(s)	Mudstone
Comments	Olive gray mud to partially consolidated mudstone with some fine sand. Science lead made the decision to have this split off the first geo sample and make it a primary specimen. Event should be 11 but a water sample was missing and added later, hence two events with 10 label.

Niskin Sampling Summary

Sample ID	EX2306_D01_06W
Date (UTC)	20230824
Time (UTC)	230824
Depth (m)	2253.1
Latitude (decimal degrees)	55.92776
Longitude (decimal degrees)	-152.92050
Bottle Number	NISKIN 1
Temperature (°C)	1.564
Dissolved Oxygen (ml/L)	3.406
Treatment	DNA/RNA Shield

Sample ID	EX2306_D01_07W
Date (UTC)	20230824
Time (UTC)	231750
Depth (m)	2253.1
Latitude (decimal degrees)	55.92841
Longitude (decimal degrees)	-152.91830
Bottle Number	NISKIN 2
Temperature (°C)	1.781
Dissolved Oxygen (ml/L)	2.322
Treatment	DNA/RNA Shield

Sample ID	EX2306_D01_08W
Date (UTC)	20230824
Time (UTC)	234200
Depth (m)	1512.7
Latitude (decimal degrees)	55.92802
Longitude (decimal degrees)	-152.91990
Bottle Number	NISKIN 3
Temperature (°C)	2.293
Dissolved Oxygen (ml/L)	0.990
Treatment	DNA/RNA Shield

Sample ID	EX2306_D01_09W
Date (UTC)	20230825
Time (UTC)	000603
Depth (m)	759.4
Latitude (decimal degrees)	55.92754
Longitude (decimal degrees)	-152.92070
Bottle Number	NISKIN 4
Temperature (°C)	3.433
Dissolved Oxygen (ml/L)	0.442
Treatment	DNA/RNA Shield

Sample ID	EX2306_D01_10W
Date (UTC)	20230825
Time (UTC)	001919
Depth (m)	353.0
Latitude (decimal degrees)	55.92551
Longitude (decimal degrees)	-152.92160
Bottle Number	NISKIN 5
Temperature (°C)	4.303
Dissolved Oxygen (ml/L)	1.006
Treatment	DNA/RNA Shield

Scientists Involved

Name	Affiliation
Robert Carney	Louisiana State University
Gabriel Castro-Falcón	Scripps Institution of Oceanography
Christina Conrath	NOAA
Meredith Everett	NOAA
Sarah Friedman	NOAA
Phil Hartmeyer	NOAA
Heather Judkins	University of South Florida St. Petersburg
Susan Loricchio	AFA
Hugh MacIntosh	Royal BC Museum
Stephen Maconi	GFOE
Christopher Mah	National Museum of Natural History, Smithsonian Institution
George Matsumoto	MBARI
Cheryl Morrison	USGS Eastern Ecological Science Center
Sean Rooney	NOAA
Jane Rudebusch	USGS
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