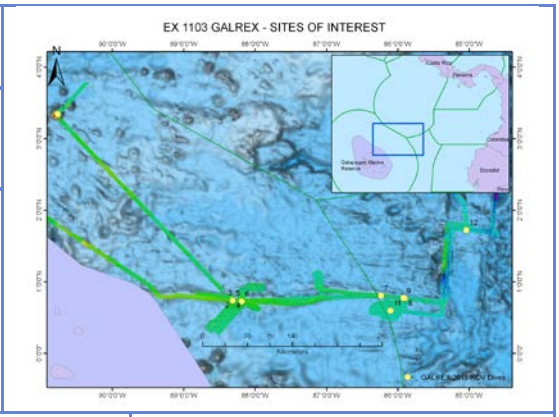
OKEANOS EXPLORER ROV DIVE SUMMARY

Site Name	4aW		
ROV Lead/ Expedition Coordinator	Dave Lovalvo/ Jeremy Potter		
General Area Descriptor	Site 4aW, Galapagos Rift eastern limb, ~320nm northwest of the Galapagos Islands		
ROV Dive Name	Cruise Season	Leg	Dive Number
	EX1103	2	DIVE010
Equipment Deployed	ROV:	Little Hercules	
	Camera Platfom:	Seirios	
ROV Measurements	☒ CTD	☒ Depth	☒ Altitude
	☒ Scanning Sonar	☒ USBL Position	☒ Heading
	☒ Pitch	☒ Roll	☒ HD Camera
	☒ Low Res Cam 1	☒ Low Res Cam 2	
Equipment Malfunctions	None		
ROV Dive Summary (From processed ROV data)	Dive Summary: EX1103L2_DIVE10 ^^ In Water at: 2011-07-23T14:23:27.400000 00°, 46.316' N ; 085°, 54.769' W Out Water at: 2011-07-23T23:41:50.570000 00°, 45.679' N ; 085°, 54.783' W Off Bottom at: 2011-07-23T21:04:14.335000 00°, 46.202' N ; 085°, 54.988' W On Bottom at: 2011-07-23T16:15:53.912000 00°, 46.183' N ; 085°, 54.731' W Dive duration: 9:18:23 Bottom Time: 4:48:20 Max. depth: 2566.5 m		
Special Notes	Click here to enter text.		
Scientists Involved *(please provide name / location / affiliation / email)*	Timothy M. Shank/ Okeanos Explorer Lead Scientist/WHOI/tshank@whoi.edu Edward T. Baker/NOAA-PMEL, Washington/Edward.baker@noaa.gov Robert W. Embley/NOAA-PMEL, Oregon/Robert.w.embley@noaa.gov Stephen Hammond/ NOAA-PMEL, Oregon/Stephen.r.hammond@noaa.gov James F. Holden/ UMASS Amherst/jholden@microbio.umass.edu Scott White/University of South Carolina/swhite@geol.sc.edu Sharon L. Walker/ NOAA-PMEL, Washington/sharon.l.walker@noaa.gov Santiago Herrera/ WHOI Exploration Command Center/WHOI/sherrera@whoi.edu T. Jennifer Lin/UMASS Amherst/tjennlin@gmail.com Catriona Munro/ WHOI Exploration Command Center WHOI/catmunro89 @gmail.com		

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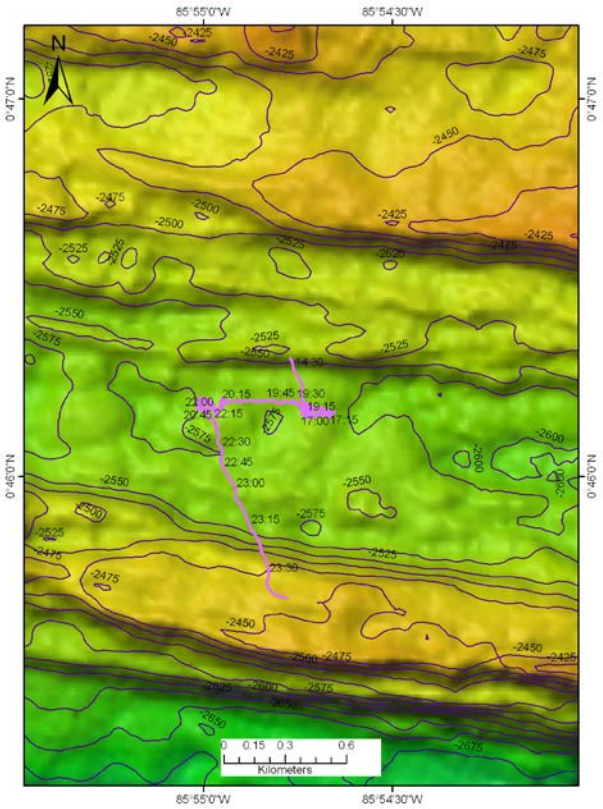
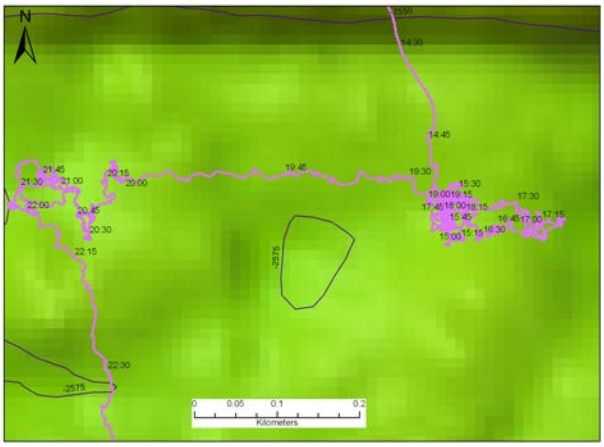
Purpose of the Dive

To descend with ROV *Little Hercules* on Dive 10 of this program to the active hydrothermal field we discovered on the previous dive on the eastern limb of the Galapagos Rift just north of a east-west running fissure. The goal of this dive is to relocate the field, document what we believe to be small recently colonizing animals (e.g., tubeworm and mussels), and determine the E-W extent of the field, before continuing our exploration to the west.

Description of the Dive:

Once on bottom, ROV Little Hercules relocated the diffuse hydrothermal vent field with abundant anemones on lobate lavas and proceeded into the Riftia community imaged on Dive 09 before heading east over dead clam shells and live mussels. We then moved to the south over fields of clam shells and imaged dandelions and serpulid worms on the edge of the vent field. Little Hercules extended tether out to the N/NE and found no signs of active venting, then extended to the east to see the boundary of the clam field and came back NE to look at the Northern extent of the field. We then made another pass through the center of the diffuse vent field, heading NE over active shimmery water and Riftia, limpets, mussels colonizing in cracks and brachyuran crabs. We observed white staining on the margins of rock and small Riftia living among dead clam shells. At the Western edge of the vent field, the vertical port thruster on Little Hercules malfunctioned and that signaled the end of the dive.

Overall Map of ROV Dive Area	Close-up Map of Main Dive Site
	

Representative Photos of the Dive

Area of active venting with Riftia, sea anemones, limpets, and serpulid worms

Area of diffuse vent field with Riftia, limpets, mussels colonizing in cracks and brachyuran crabs.

Please direct inquiries to:

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