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Purpose of the Dive

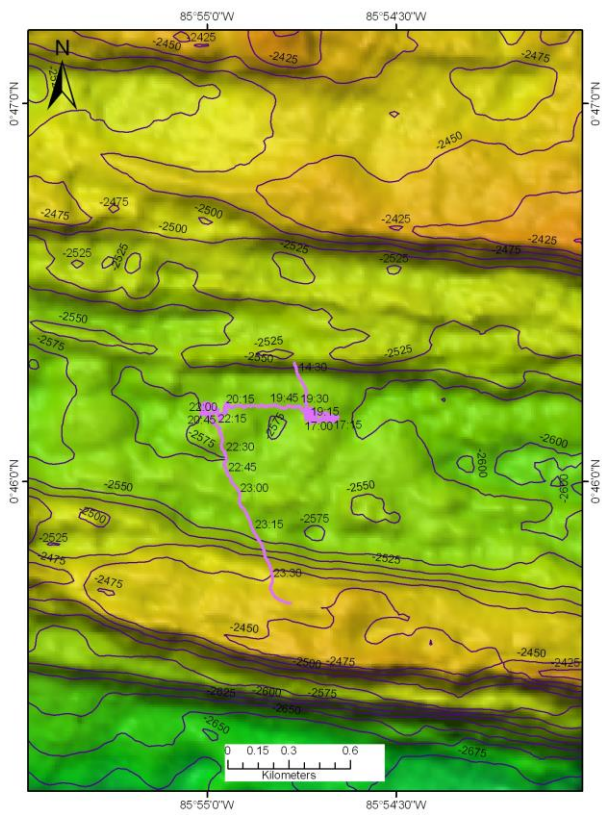
To descend with ROV *Little Hercules* on Dive 10 of this program to the active hydrothermal field we discovered on the previous dive on the eastern limb of the Galapagos Rift just north of a east-west running fissure. The goal of this dive is to relocate the field, document what we believe to be small 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 shimmering 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

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