

Long Island Sound Mapping and Research Collaborative (LISMaRC) Instrumentation List used in the Phase IIB Assessing Ecological Change and Resiliency in Long Island Sound project for LDEO Data Archive

Data Set	Instrumentation
<i>Historic Diver Images</i>	A variety of analog underwater cameras and lenses were used with Kodachrome® or Ektachrome transparency film. Images were mounted as standard 35 mm slides. These slides were subsequently digitized using a Nikon Super Coolscan 4000 ED film scanner into .jpg format files and analyzed for presence of epifaunal taxa.
<i>Historic ROV Video</i>	Three ROVs were the sources for the historical ROV video: 1) a Benthos MiniRover Mark II with standard definition (640x480) camera recording to VHS tape, 2) a Deep Ocean Engineering (DOE) Phantom 300 with standard definition (640x480 pixel) camera recording to VHS tape, and a 3) modified DOE Phantom P3S2 with standard definition camera (720x480 pixel) recording to DVCAM tape.
<i>New PISSAH Images and Grabs</i>	Ponar Imaging and Sampling System for Assessing Habitat (PISSAH) with two GoPro cameras (one model 10 forward looking, one model 11 downward looking), both recording 4K video. Individual frame captures were made from the down looking video using VLC (v. 3.0.20, 2023), producing 3840x2160 pixel .tiff images, 24.9 MB. Images were analyzed using ImageJ (v. 1.53k, 2021). Sediment grabs taken with the standard Ponar (229x229 mm) grab.
<i>New Diver Images</i>	An Olympus TG6 digital underwater camera with Keldan CR196 video lights used in handheld mode and a SONY RX100 III digital camera in a Sea & Sea-RX100 III underwater housing while mounted on a quadrapod frame with Light and Motion SOLAS lights. The quadrapod mounted camera produced images covering 0.25 m <sup>2</sup> . Files were saved as .jpg file format with file sizes ranging from 5.7 to 12.2 MegaBytes (MB).
<i>New ROV Video and Images</i>	A Boxfish Alpha observation class ROV with a Sony 4K (3840x2160 pixel) camera that recorded directly to an Atomos Ninja digital recorder captured using Apple ProRes 422 HQ at a resolution of 3840x216 pixels.