

Dataset Originator: *Frank O. Nitsche, Timothy Kenna, Cecilia McHugh, Chris Conroy*

Publication Date: *2024-01-10*

Dataset Title: *LIS phase 3A LDEO sediment grab bottom photos*

Online Linkage: *<http://www.marine-geo.org/portals/lis/>*

Abstract: *Still images of the seafloor taken from the location from which sediment grabs were taken for the Long Island Sound mapping phase 3A project. The images were taken during the LIS2301 surveys in June 2023 using two GoPro Hero cameras mounted on the sediment grab frame from the Research vessel Weicker. One camera was forward looking and the second one looked straight down. Diving lights were used to illuminate the bottom. The cameras were part of the Ponar grab system provided by the University of Connecticut and operated by Chris Conroy from the University of New Haven, who processed the videos and took frame grabs of the bottom. At some stations one of the two camera failed to record a suitable video due to battery or other problems. The three stations on the first day were only recorded with the forward-looking camera. As result for some stations there is only a bottom image from the forward-looking camera system. The GoPro camera recorded video images. The still images were extracted by Chris Conroy as frame grabs of the video when the seafloor was showing the clearest. For location the images were tagged with the location recorded for the sediment grab station.*

Dataset purpose: *Bottom images were collected to get a better overview of the actual seafloor from which the grab samples are taken. It also allows the seafloor character to be classified when we could not recover an actual grab sample, e.g. when the bottom was too hard or consisted of exposed rocks.*

Time period of content: *2023-06-12 to 2023-06-15*

Dataset Status: *complete*

Update Frequency: *'none planned'*

Theme Keywords: *Long Island Sound, sediment grabs, bottom image*

Access Constraints: *none*

Use Constraints: Data and metadata are is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 3.0 United States License](https://creativecommons.org/licenses/by-sa/4.0/). Appropriate acknowledgment with a byline/credit/link **must** be given to both the original scientists/data contributors by reference to their relevant publications and to the Marine Geoscience Data System (www.marine-geo.org). Where citation information has been provided to us by scientists it is included with the relevant database entries, and should be acknowledged when data are used. You may browse freely, but you may not circulate or publish materials you obtained from this site if you do not accept the terms of providing adequate citation.

Data are provided with the express understanding that they will not be sold to third parties or included in commercial databases.

Users are strongly encouraged to contact the original investigators responsible for data made available on this site. Where appropriate, researchers are also encouraged to consider collaboration and/or co-authorship with original investigators.

Data should not be used for navigation purposes.

Point of Contact: *Frank Nitsche, Lamont-Doherty Earth Observatory of Columbia University, fnitsche@ldeo.columbia.edu*

Dataset Credit: *LIS mapping project, Frank O. Nitsche, Timothy Kenna, Cecilia McHugh, Chris Conroy*

Data Quality Considerations: These are processed data. Image quality is affected by water turbidity.

Attribute accuracy: *The location is based on the ship DGPS for grab locations. Location offset between ship GPS antenna and grab sampling device, and drift of grab sampling device in water have not been corrected.*

Completeness: *The dataset is complete.*

Positional accuracy: *Location is based on DGPS using the ship GPS antenna. Lateral offset between ship GPS antenna and grab sampling device, and drift of grab sampling device in water have not been corrected. The resulting absolute uncertainty could be of the order of 5-10m.*

Process Steps: *The images were taken during a survey in 2023 using two GoPro Hero cameras mounted on the sediment grab frame. The videos were processed using video editing software and still images close to the bottom were extracted as tiff images and converted to jpg files after identifying the best image of the seafloor. An exiftool script was used to add the location to the jpeg file.*

Attributes: none.

Metadata reference: *Frank Nitsche, Lamont-Doherty Earth Observatory of Columbia University, fnitsche@ldeo.columbia.edu*