The National Deep-Sea Coral and Sponge Database:

A Comprehensive Resource for United States Deep-Sea Coral and Sponge Records

Dornback, M*, T. Hourigan, P. Etnoyer, R. McGuinn, S. Cross, D. Sallis National Coastal Data Development Center matt.dornback@noaa.gov

Deep-sea corals and sponges grow

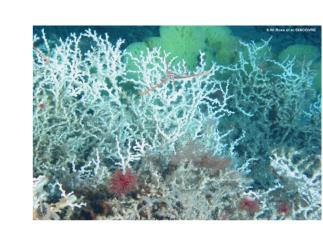
extremely slowly and live for hundreds of years in cold, dark waters mostly at depths between 50m to 6000m. They are not dependent on sunlight driven symbiotic relationships.

These habitat forming animals are quite fragile and vulnerable to deep-sea activity such as bottom trawls, long lining, energy exploration, and cable deployments.

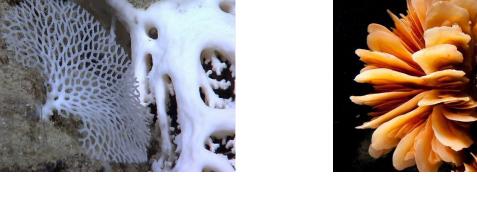
Research on deep-sea corals and sponges has expanded rapidly over the last two decades, as scientists began to realize their value as long-lived structural components of high biodiversity habitats and archives of environmental information.

The NOAA Deep Sea Coral Research and Technology Program's (DSCRTP) National Database for Deep-Sea Corals and Sponges is a comprehensive resource for georeferenced data on these organisms in U.S. waters.

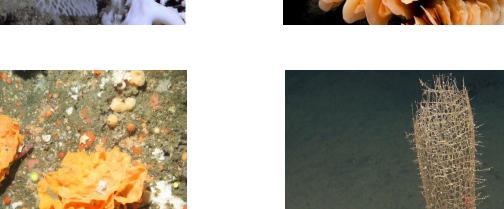


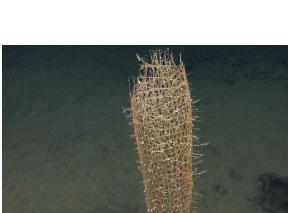












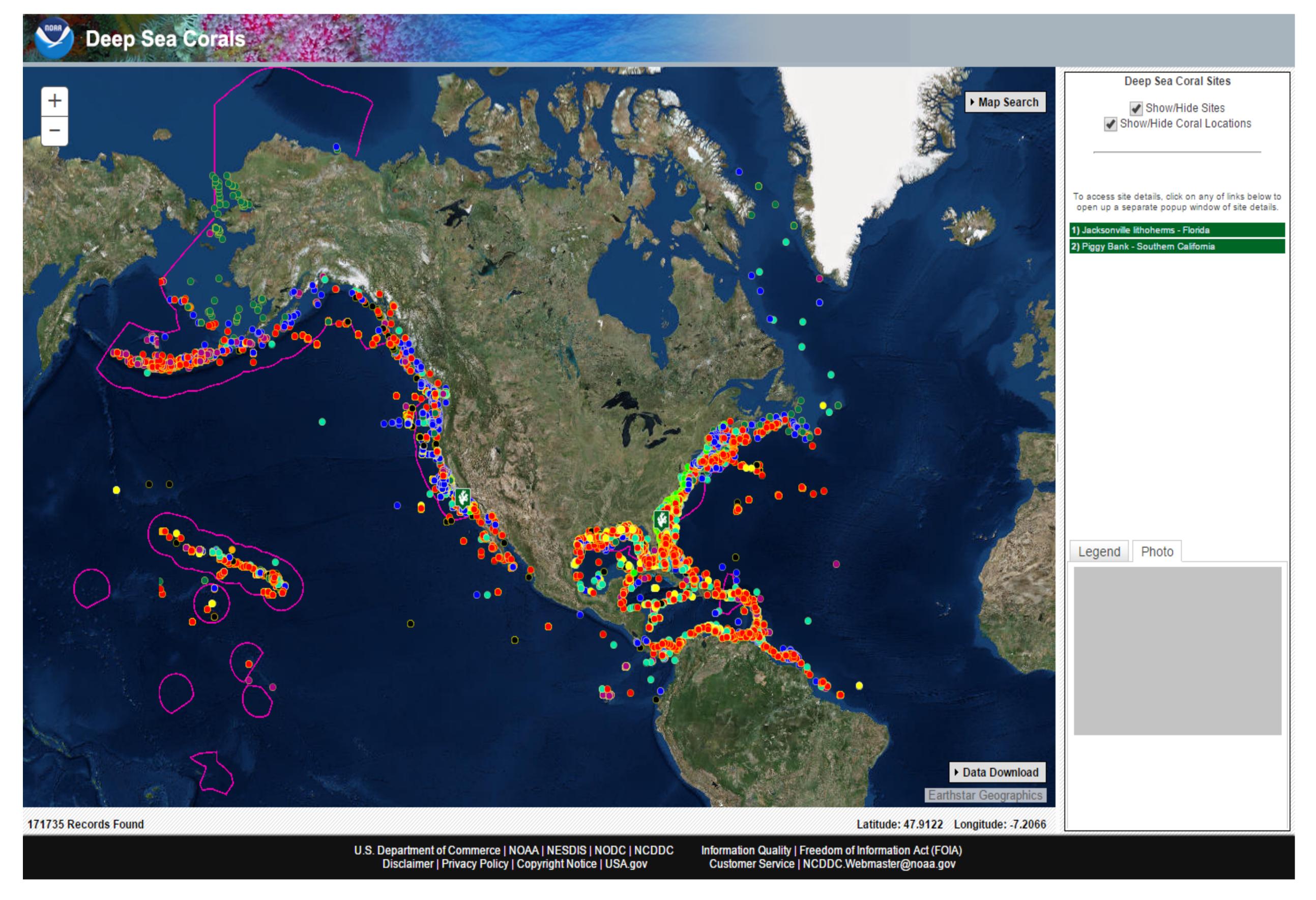
The National Database provides a

standardized high resolution dataset of coral and sponges occurrence records built from sparse and disparate low resolution datasets.

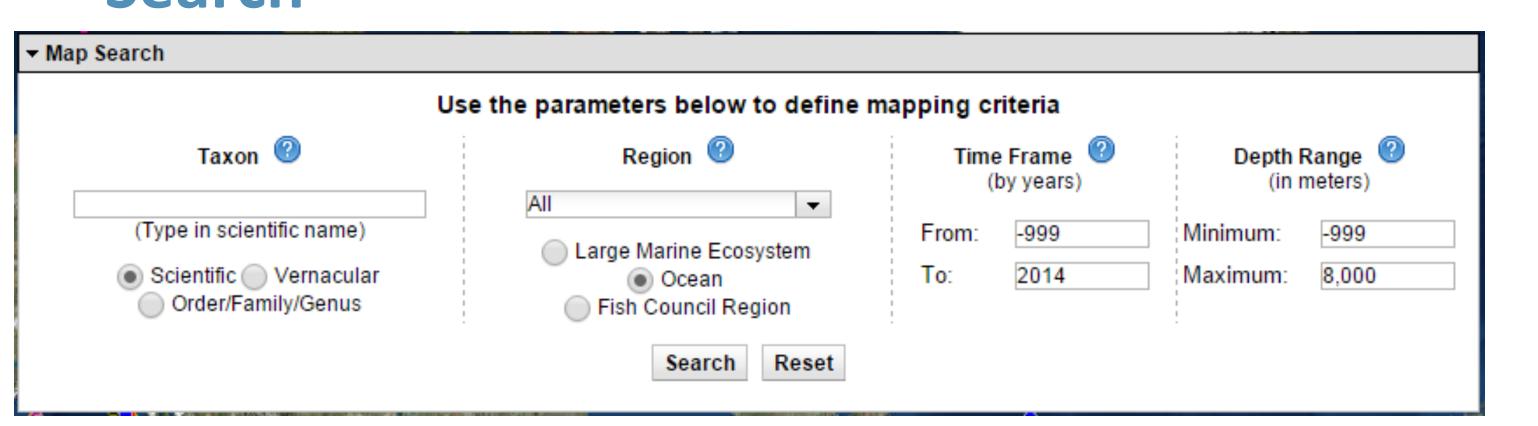
museums, research institutions, scientific literature, and DSCRTP funded research

Central repository for DSC records compiled from

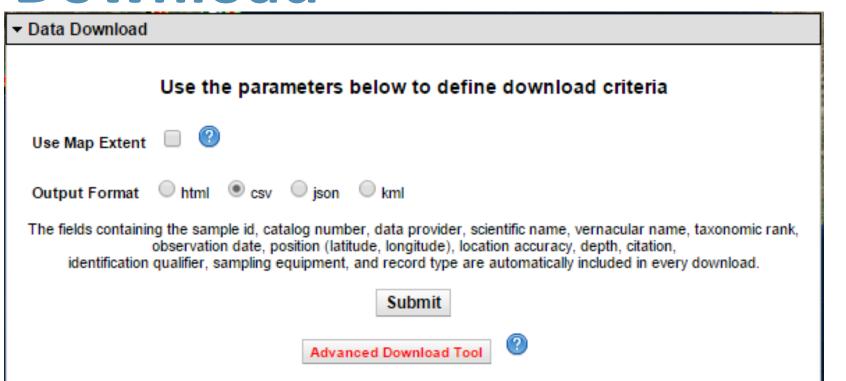
- Includes discrete point observations & linear observations (trawls, transects)
- Quality controlled and standardized content
 - Current taxonomy
 - Valid values/vocabulary
- No duplicate records
- Networked with outside resources to keep data updated



Search

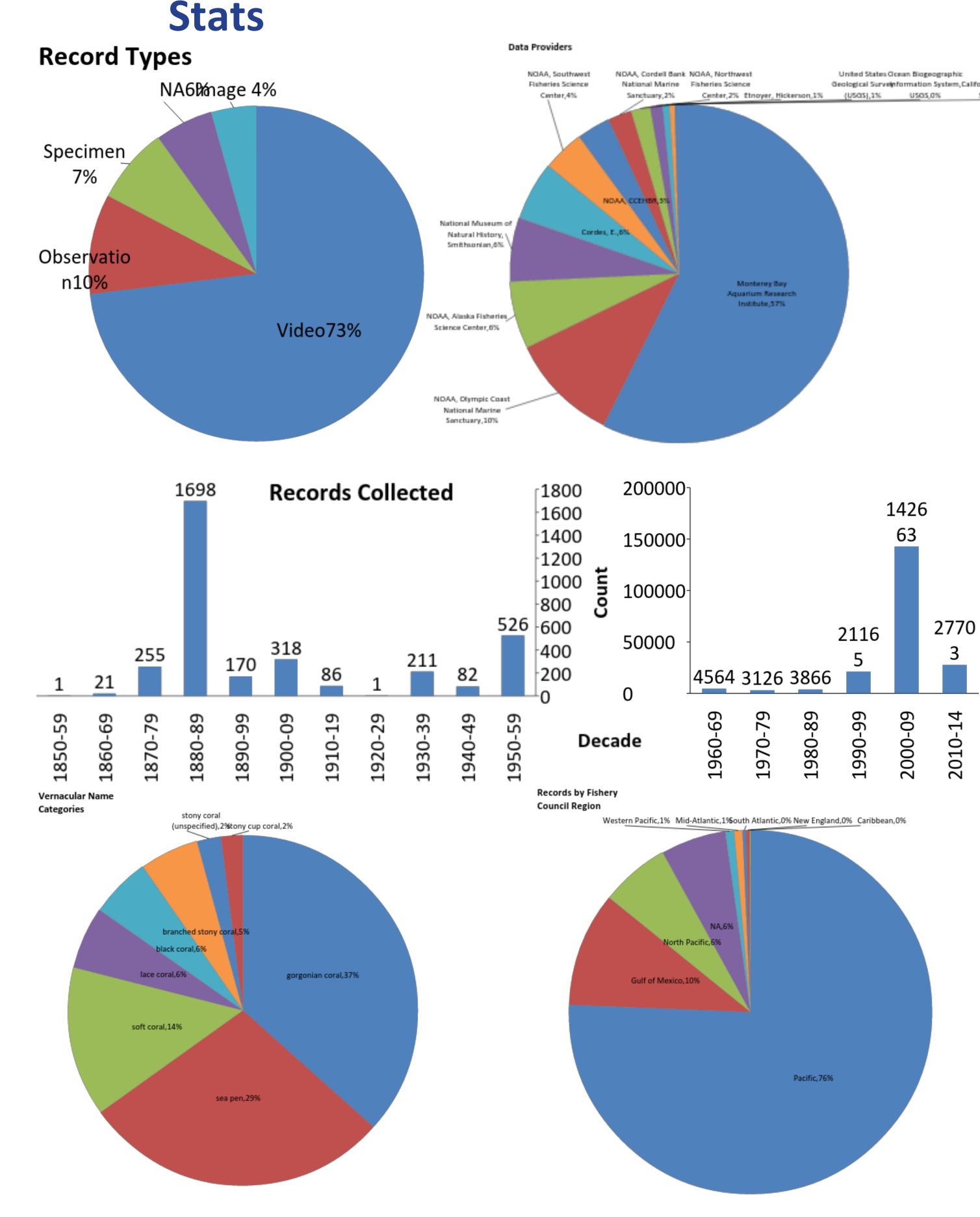


Download



Open standards driven software, data distribution, and documentation ensure that the data will be understood and usable by everyone. There are no obscure standards to learn and no expensive software to buy. Some of the open standards used for this project include:

- OBIS-USA database schema based on Darwin Core standard
- World Register of Marine Species (WoRMS) for taxonomic nomenclature
- GenBank genetic sequence database
- Environmental Research Division's Data Access Program (ERDDAP) OPeNDAP based communication



Future work is needed to solidify the initial work on the National Deep-Sea Corals and Sponges Database.

- Continue to implement standards such as the Coastal and Ecological Classification Standard (CMECS)
- Link database records to their origin sample image where applicable
- Work with foreign institutions to include international records
- Develop a standard methodology to determine associated taxa to corals and sponges

References:

- Hourigan, T. F., P. J. Etnoyer, R. P. McGuinn, C. Whitmire, D. Dorfman, M. Dornback, S. Cross, D. Sallis. 2014. An Introduction to NOAA's National Database for Deep-Sea Corals and Sponges. NOAA Technical Memorandum NOS NCCOS xx/NMFS xx. 26 pp. Silver Spring, MD.
- Moustahfid, H.; Potemra, J.; Goldstein, P.; Mendelssohn, R.; DesRochers, A., "Making United States Integrated Ocean Observing System (U.S. IOOS) inclusive of marine biological resources," OCEANS 2011, vol., no., pp.1,9, 19-22 Sept. 2011



•Metadata ISO 19115-2