MBON Data Management and Cyberinfrastructure Working Group (MBON DMAC WG)

Mathew Biddle and Abby Benson

Wednesday , November 2, 2022

mathew.biddle@noaa.gov

albenson@usgs.gov

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Purpose

WG purpose:

To implement interoperability, data archival, and publication standards for marine and coastal biodiversity observations.

Convergence on best practices for:

- Data formatting (from collection to application)
- Data interoperability
- Data archive
- Interconnectedness of databases

WG Structure/Expectations

- Monthly meetings (1:00 – 1:50 pm ET on the second Tuesday)
  - First 10 mins to review dataset progress
  - Announcements - upcoming meetings/related activities
  - Selected topic (eg. ATN, EDI,
- Participation and engagement from each project
  - Where are the trouble spots?
  - Where can this group help reduce those barriers?
- Coordination with other MBON working groups (mini teams)
  - eDNA, animal tracking, sound

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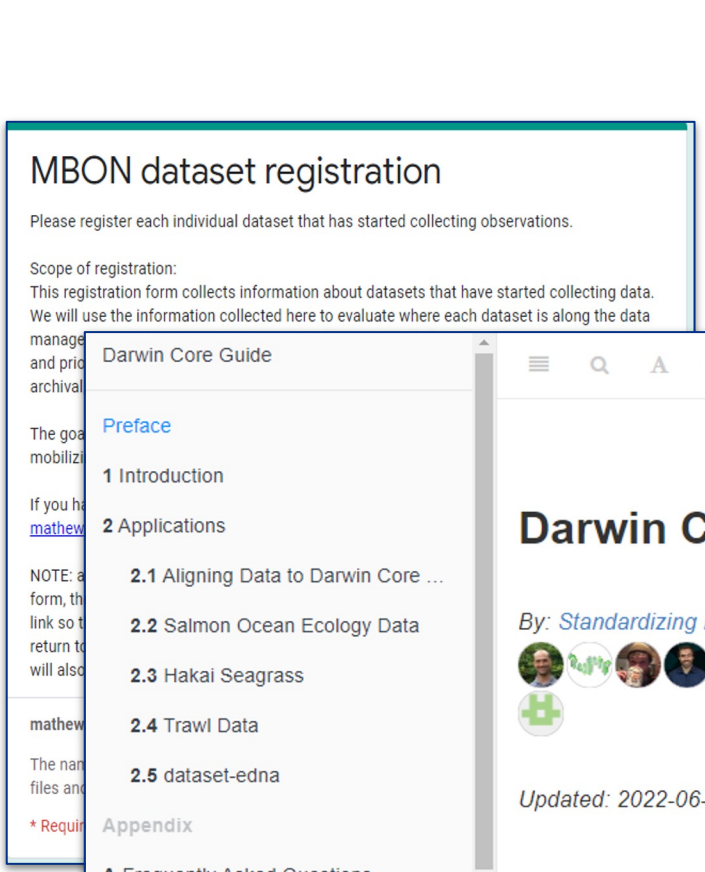
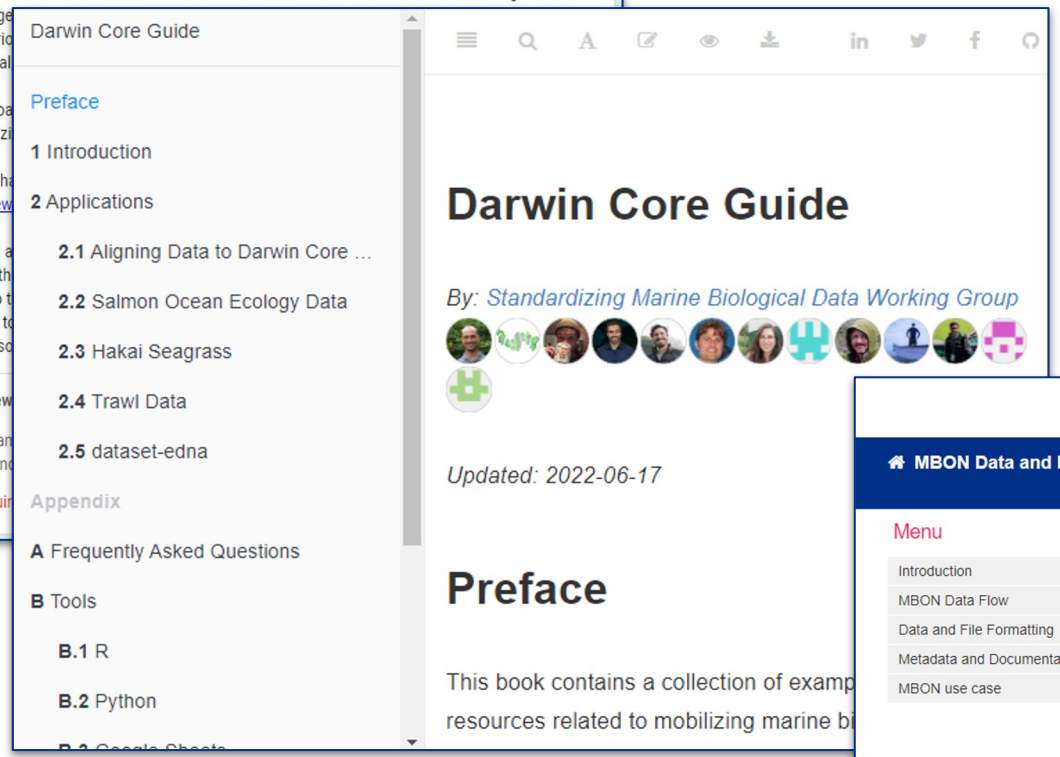
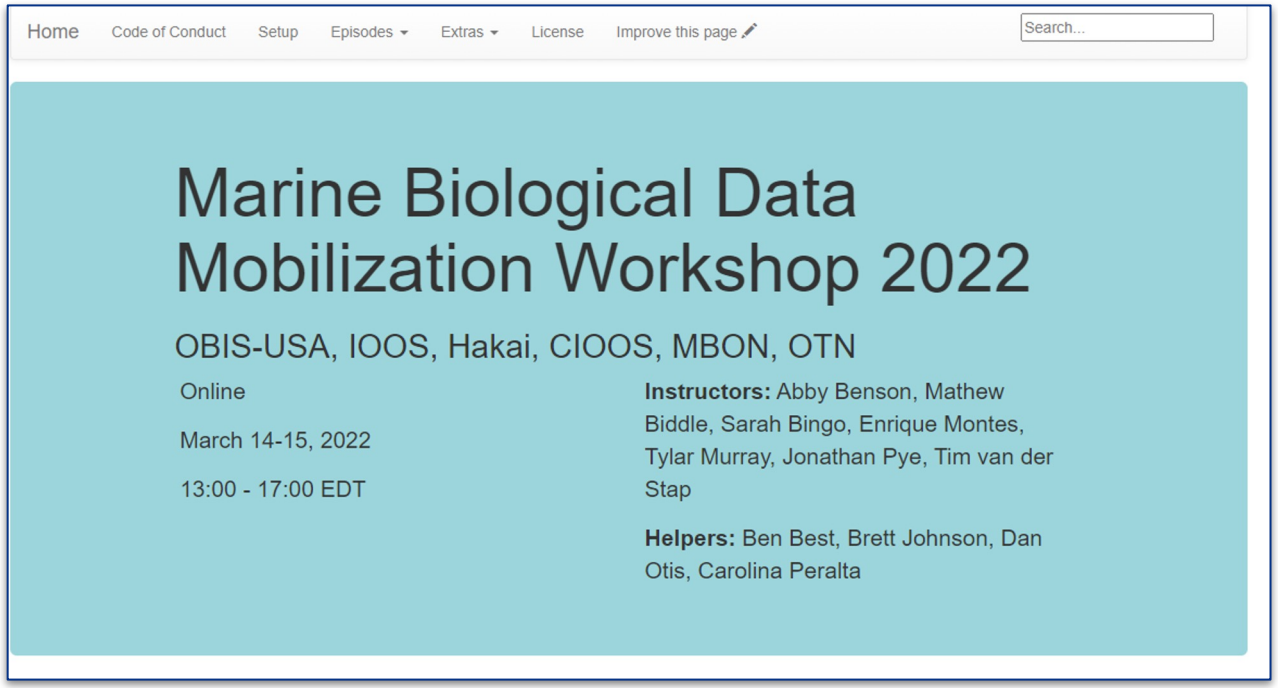
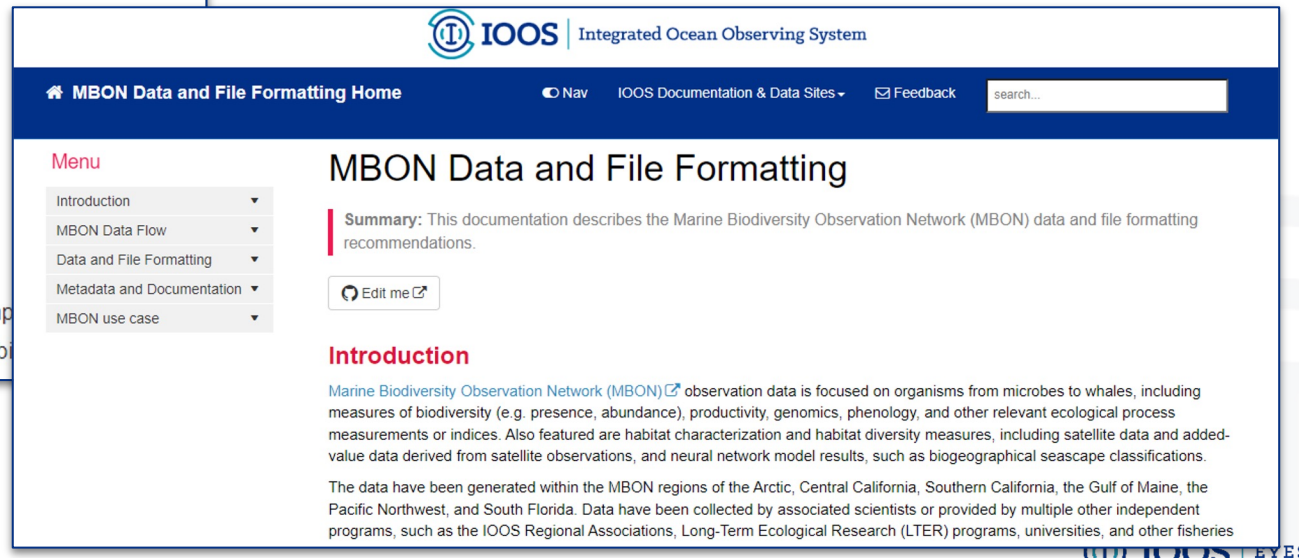
What have we done so far?





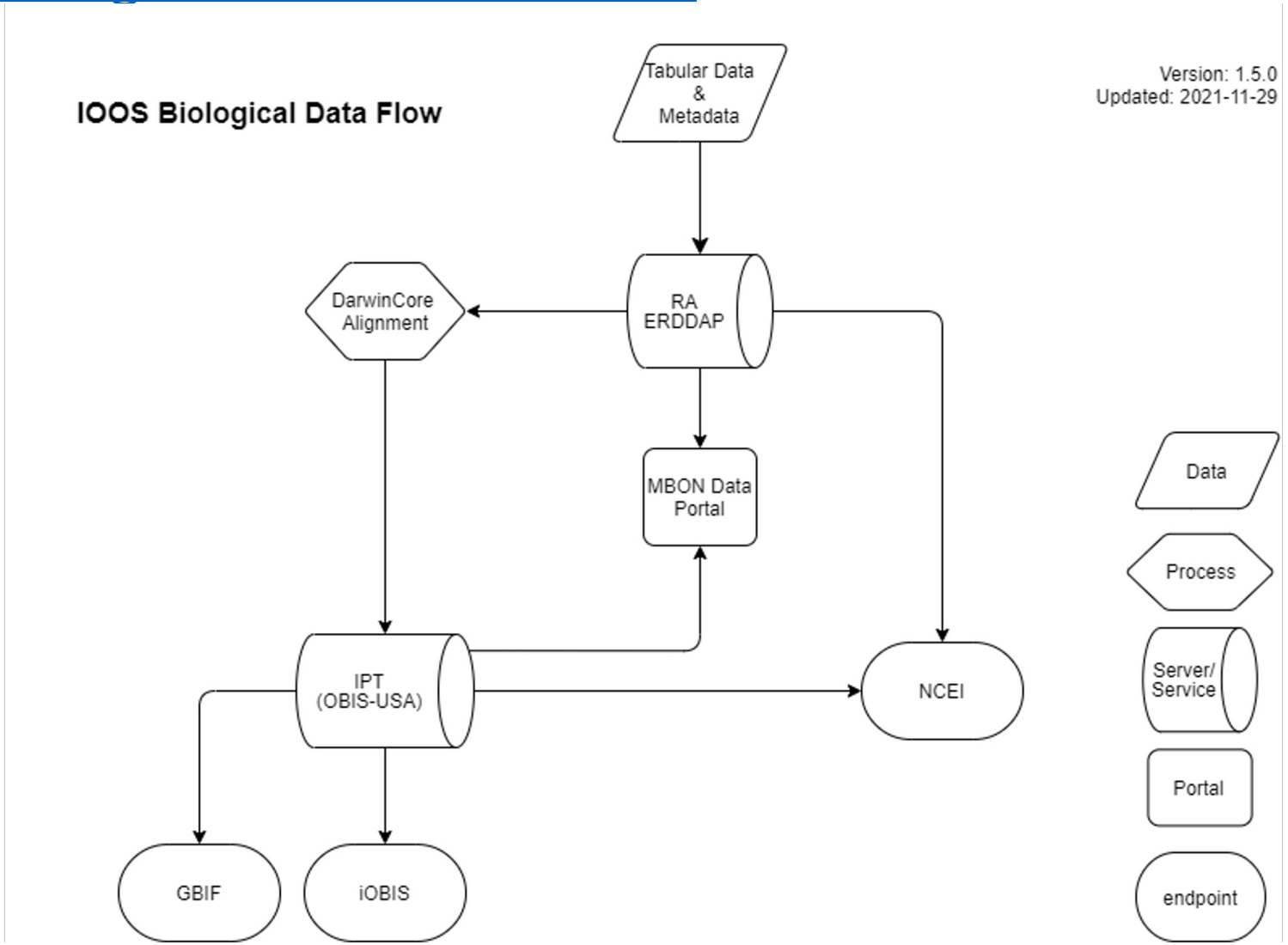




12 new/updated layers in MBON Portal (link)

Data flows for project data

https://ioos.github.io/mbon-docs/



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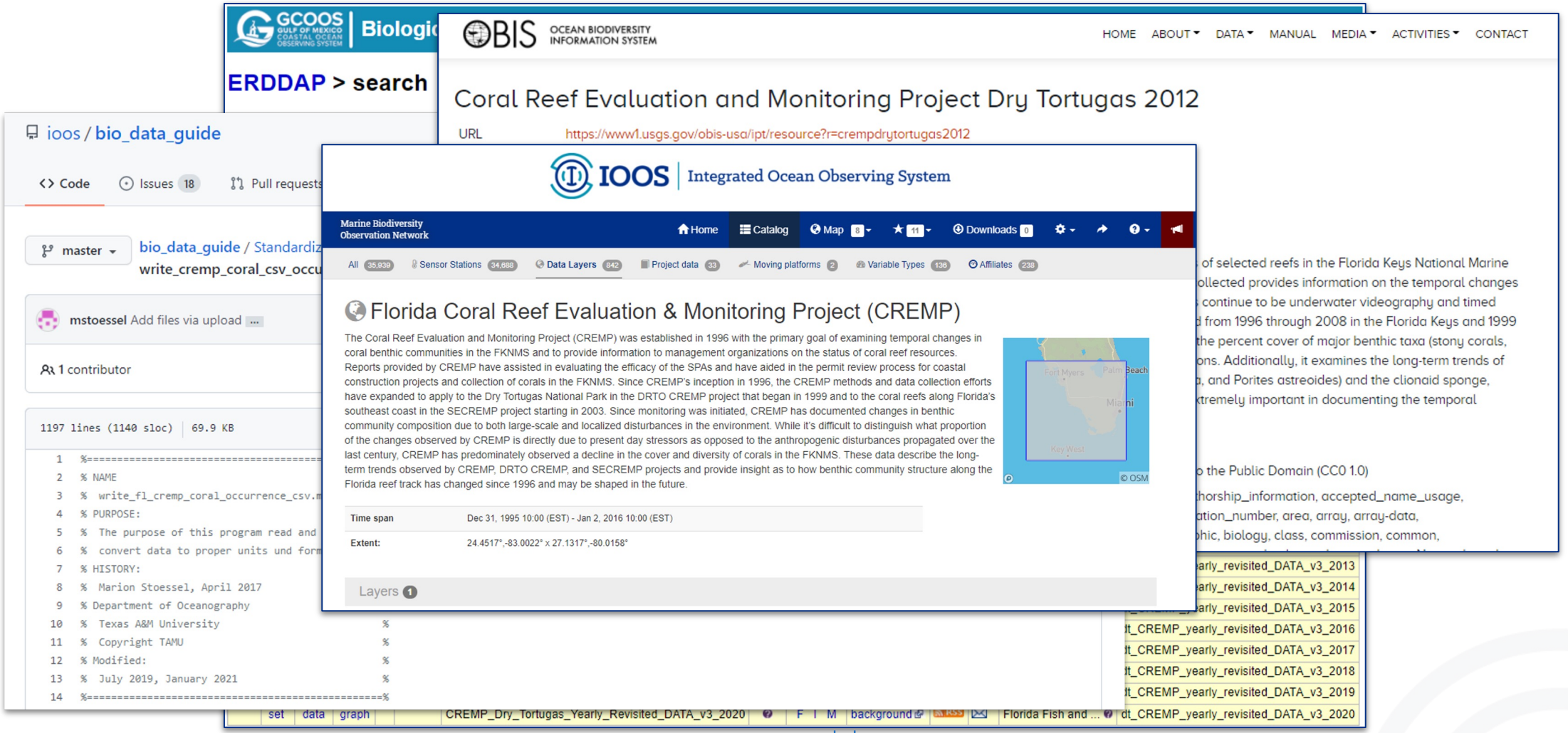
CREMP Dry Tortugas (South Florida MBON)



Marion Stoessel
(Texas A&M/GCOOS/SF MBON)

raw data
+
Matlab code
+
OBIS dataset
+
MBON data layer

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Wilkinson Basin Time Series Station (WBTS): Mesozooplankton 2004-2017

Dylan Pugh
(GMRI/NERACOOS/Gulf of Maine MBON)

raw data
+
Jupyter Notebook
+
OBIS dataset, GBIF dataset, NCEI dataset
+
Jupyter Notebook, MBON Data Portal

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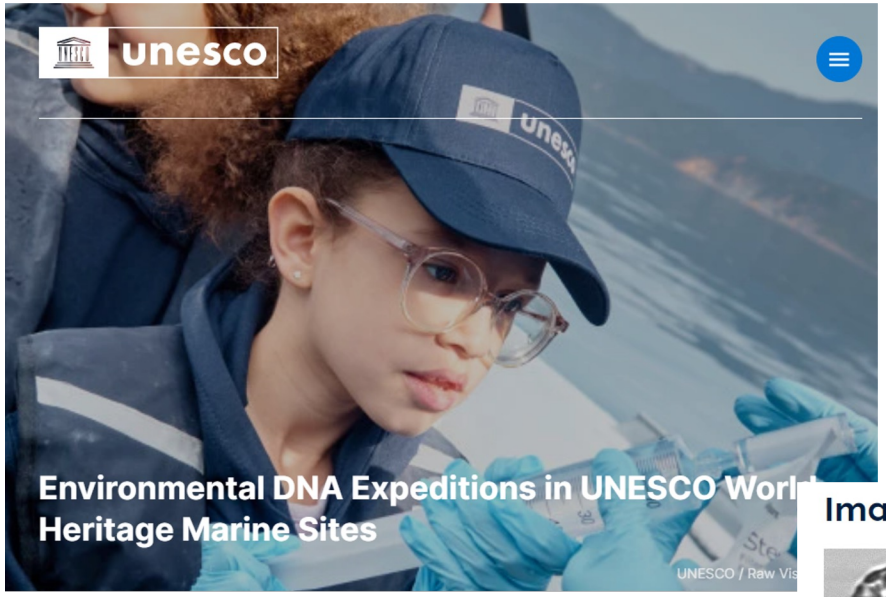
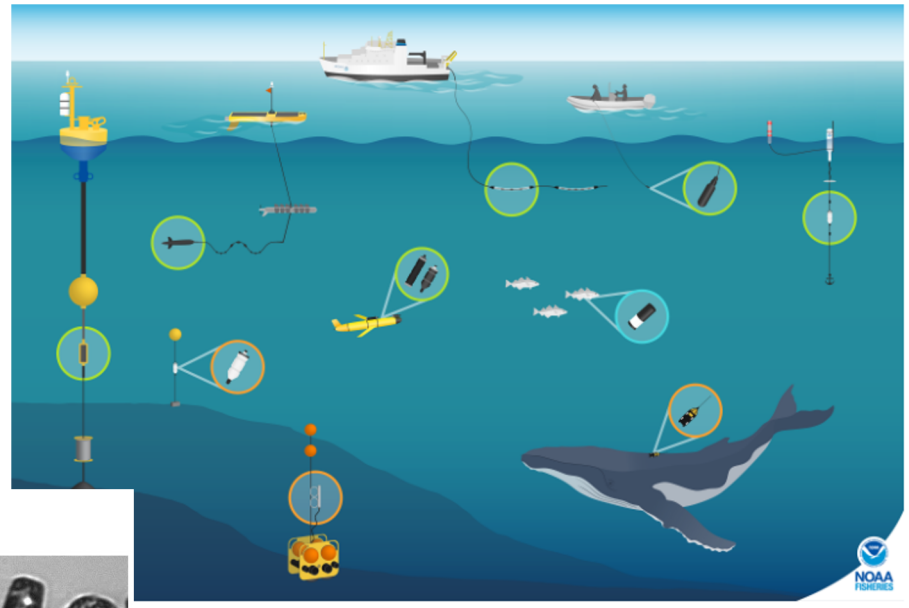
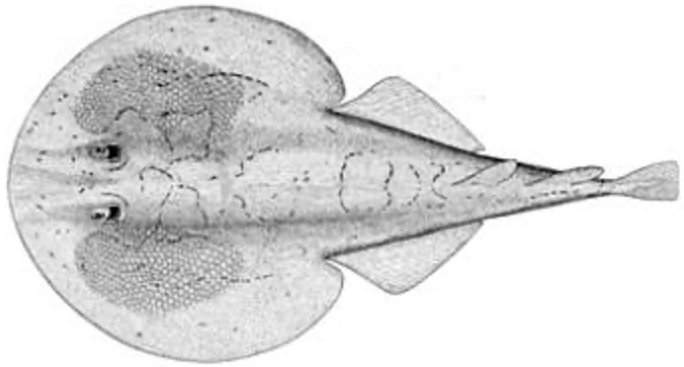
Species Observations

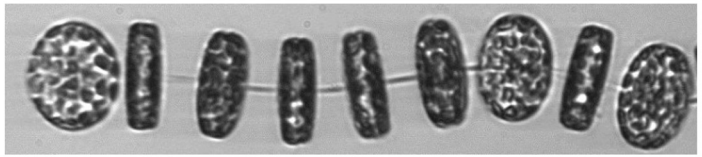


Taxon +
Location +
Date





Imaging FlowCytobot (IFCB)

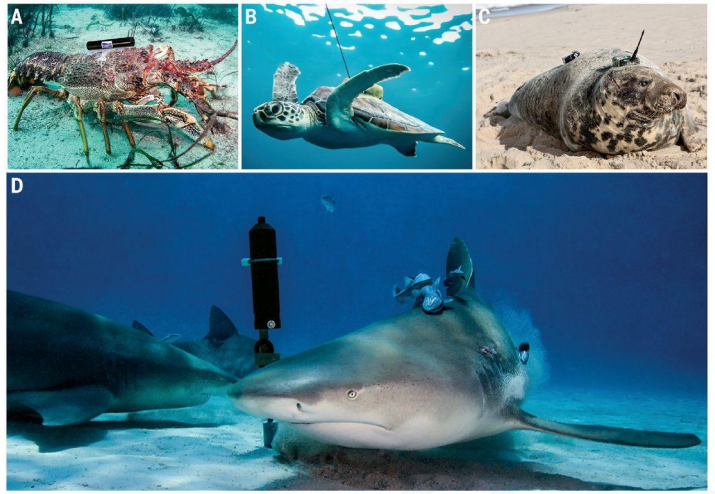


LONG TERM, HIGH-RESOLUTION MEASUREMENTS OF PHYTOPLANKTON ABUNDANCE AND CELL PROPERTIES: IMAGING FLOWCYTOBOT

Heidi with Imaging FlowCytobot in its pressure housing (R. Olson)

Rob Olson deploying Imaging FlowCytobot in the test well at the WHOI dock (A. Shalapyonok)

A fundamental understanding of the interaction between physical and biological factors that regulate plankton species composition requires, first of all, detailed and sustained observations. Only now is it becoming possible to acquire these types of observations, as we develop and deploy instruments that can continuously monitor individual organisms in the



Archived at NCEI

National Centers for Environmental Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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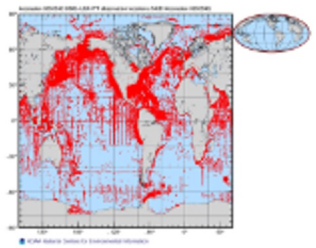
Marine biological occurrence data managed by Ocean Biodiversity Information System USA (OBIS-USA) Integrated Publishing Toolkit (IPT) updated on 2022-09-28 (NCEI Accession 0250940)



Preview graphic

This dataset includes marine biological occurrence data managed by the Ocean Biodiversity Information System USA (OBIS-USA). The data were observed between 1832-11-30 and 2022-07-19. These data were last updated by OBIS-USA on 2022-09-28 and were received by NCEI on 2022-09-29.

OBIS-USA brings together marine biological occurrence data – recorded observations of identifiable marine species at a known time and place, collected primarily from U.S. waters or with U.S. funding. Coordinated by the Science Analytics and Synthesis (SAS) program of the United States Geological Survey (USGS), OBIS-USA, strives to meet national data integration and

Show more...

- Dataset Citation
- Dataset Identifiers
- ISO 19115-2 Metadata

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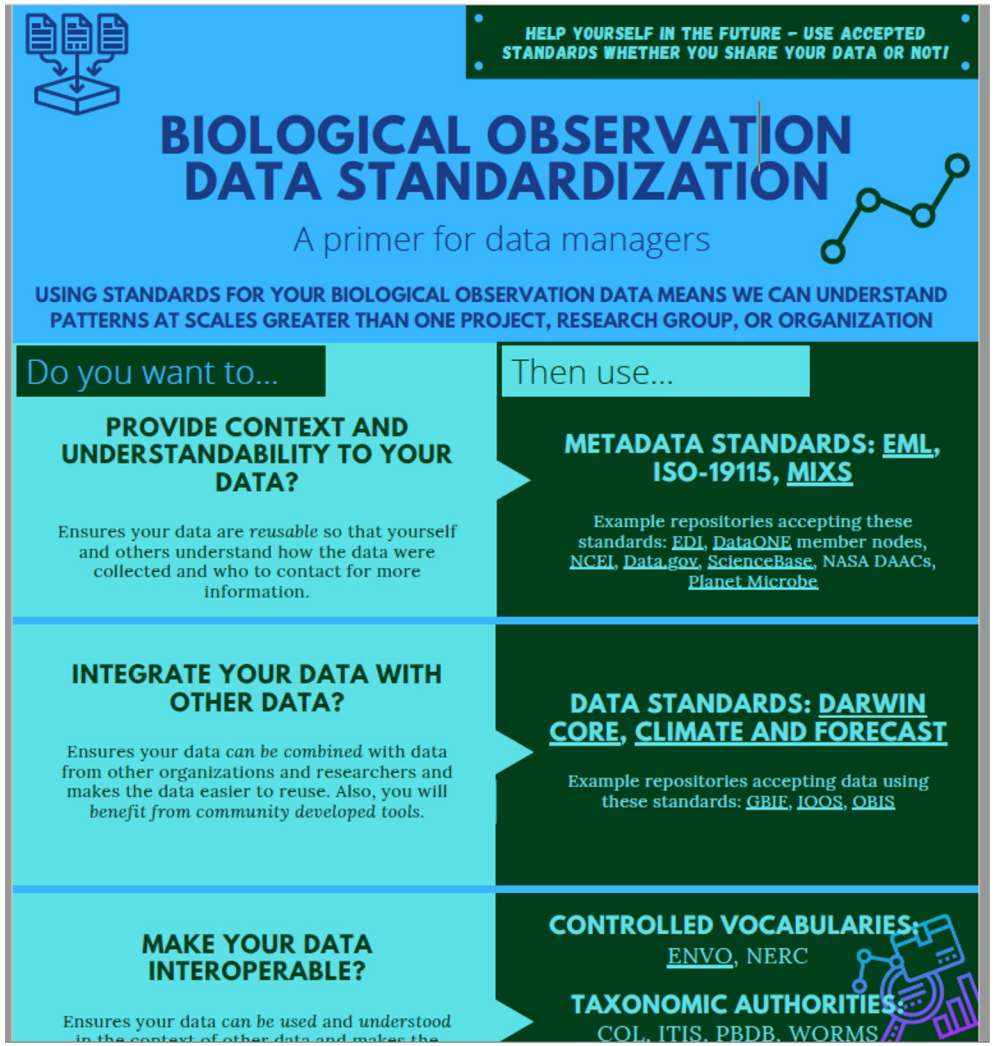
Other updates



https://doi.org/10.6084/m9.figshare.16806712.v2

MBON datasets in the pipeline

- Inventory form: https://forms.gle/4NjKV7NWGLPcE2sb8
- Inventory responses: https://bit.ly/3WgyHTt

What can we do with this information?

Metrics gathering: https://github.com/MathewBiddle/sandbox/blob/main/notebooks/IOOS_occurrences_in_OBIS.ipynb

Global ES50 Indicator visualization (**in development**): https://mathewbiddle.github.io/globe/

Slido Poll

- Expectations for data management.
  - Blockers I anticipate for implementing the data management process are...
  - How much time/resources do you have allocated for data management activities?
  - What needs do you have regarding data management?

https://app.sli.do/event/5p7hXw9ErjKm8CUucw6QcB

Keep the conversation going

- Register datasets
- Assign data management specialist for each project.
- Next WG meeting Nov. 8th

MBON DMAC working group

Tuesday, November 8 · 1:00 – 1:50pm ET

Google Meet joining info

Video call link: https://meet.google.com/imf-qrhy-jgx

Or dial: (US) +1 321-351-6755 PIN: 548 540 777 #

More phone numbers: https://tel.meet/imf-qrhy-jgx?pin=2704290817714