

Introduction to the Animal Telemetry Network

Cross-MBON Virtual Meeting
February 10, 2021

Bill Woodward — ATN Network Coordinator
bill.woodward@noaa.gov



THREE ATN COMPONENTS

✓ BUILD ALLIANCES & COLLABORATIONS



✓ PROVIDE TELEMETRY DATA MANAGEMENT & DELIVERY



✓ SUPPORT BASELINE ANIMAL TELEMETRY OBSERVATIONS



Introduction to the Animal Telemetry Network Data Assembly Center

Cross-MBON Virtual Meeting
February 10, 2021

Megan McKinzie, PhD — ATN Data Coordinator
mmckinzie@mbari.org



ATN DATA ASSEMBLY CENTER



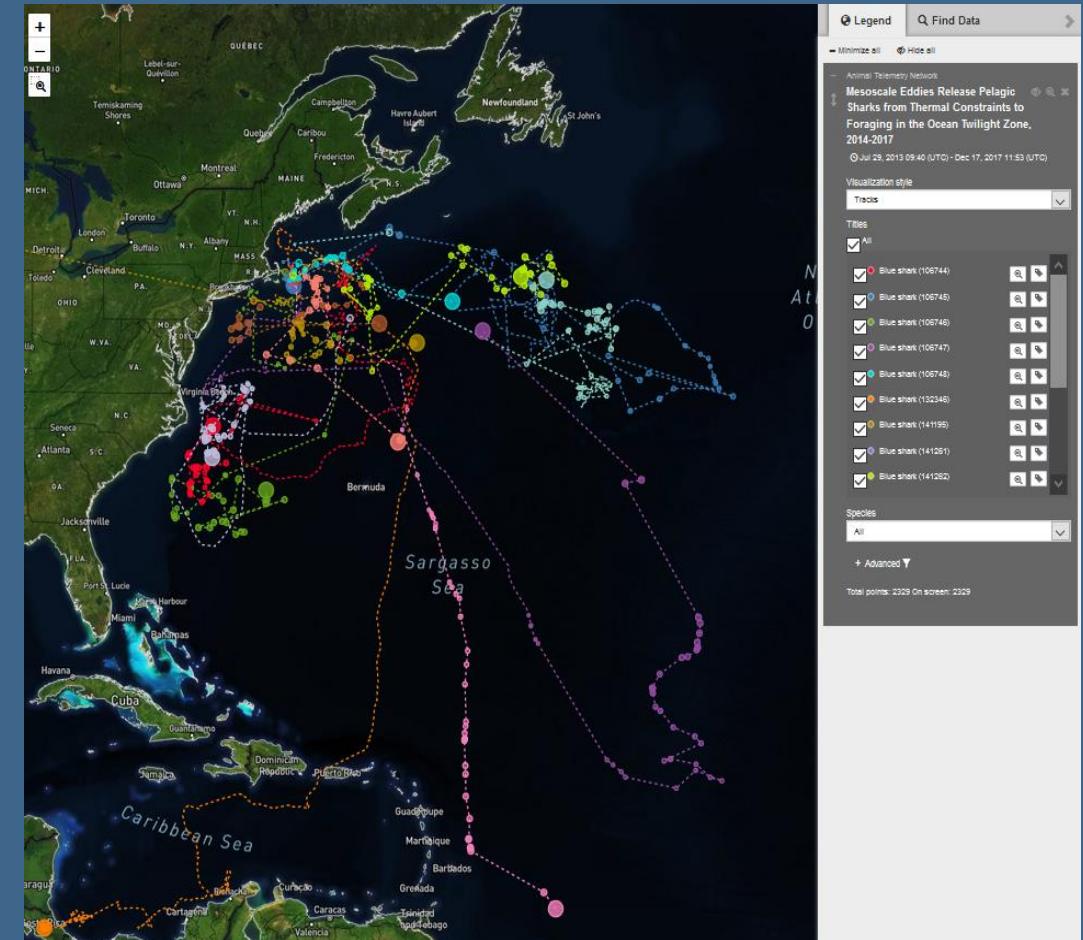
*At an operational location providing scalable,
state-of-the-art cyberinfrastructure*

A large blue whale is swimming in the ocean, its body partially submerged. The water is a deep blue color.

What is the ATN DAC?

ATN DATA ASSEMBLY CENTER

- Community resource
- Receives data from multiple sources
- Enables/promotes data availability and sharing among global community partners
- Maximizes access to telemetry data
- Enhances and expands electronic tag data products
- Enables permanent archiving at NCEI, DataONE; DOI minting



Animal Telemetry Network Data Portal



EXPLORE MAP



PROJECTS



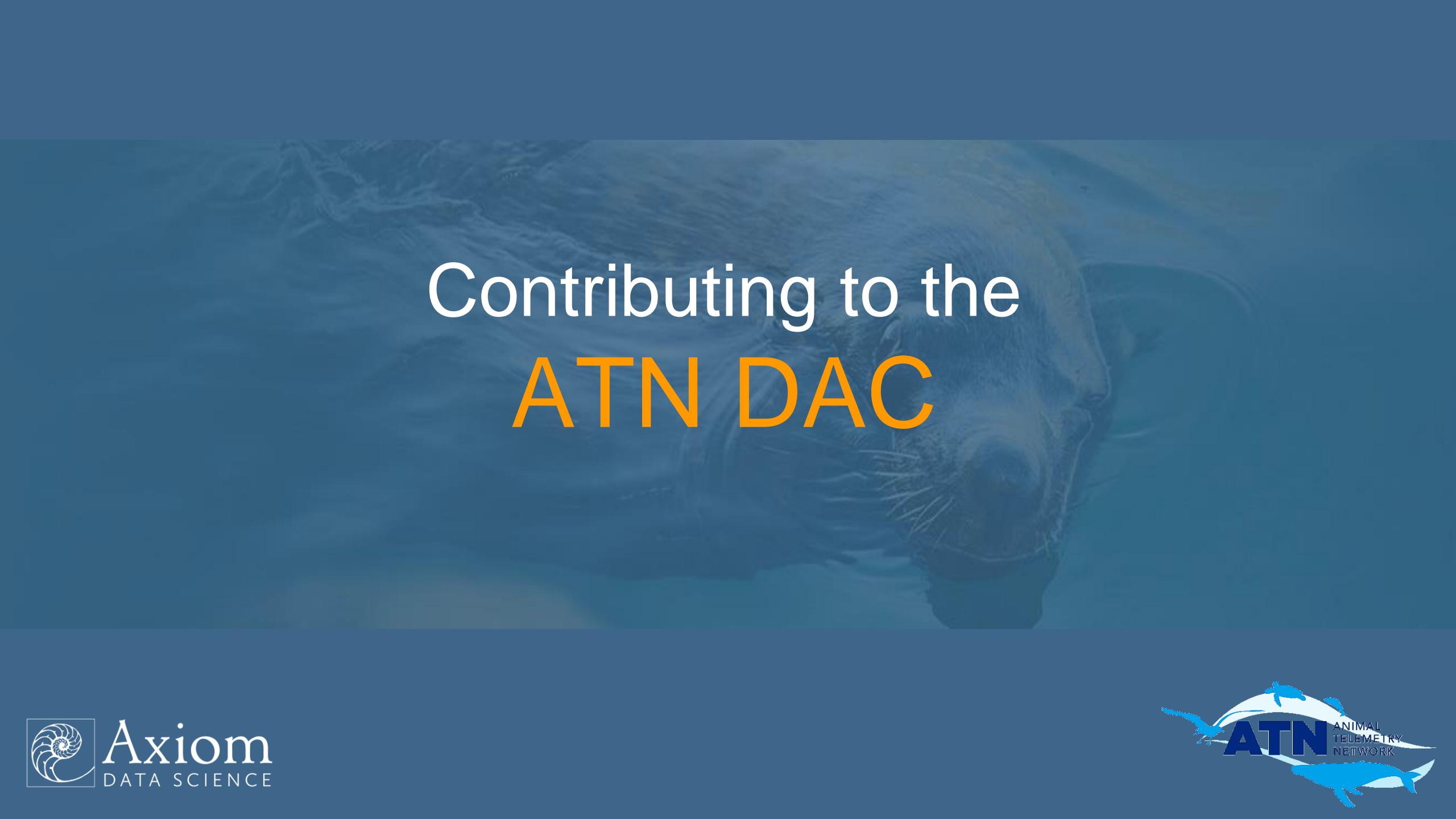
All Tag Deployments

Real-time Tag Deployments:
Past 30 DaysSatellite Telemetry Project
InventoryAcoustic Telemetry Asset
Inventory

ATN DATA ASSEMBLY CENTER

- 135 projects now registered
- 89 discoverable in data portal
- 57 species
- 2860 tag deployments
- 21 datasets DOI minted and archived at DataONE



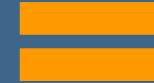


Contributing to the ATN DAC

Metadata
in
Reg App



Data feeds
from tag
vendor/service



ATN DAC

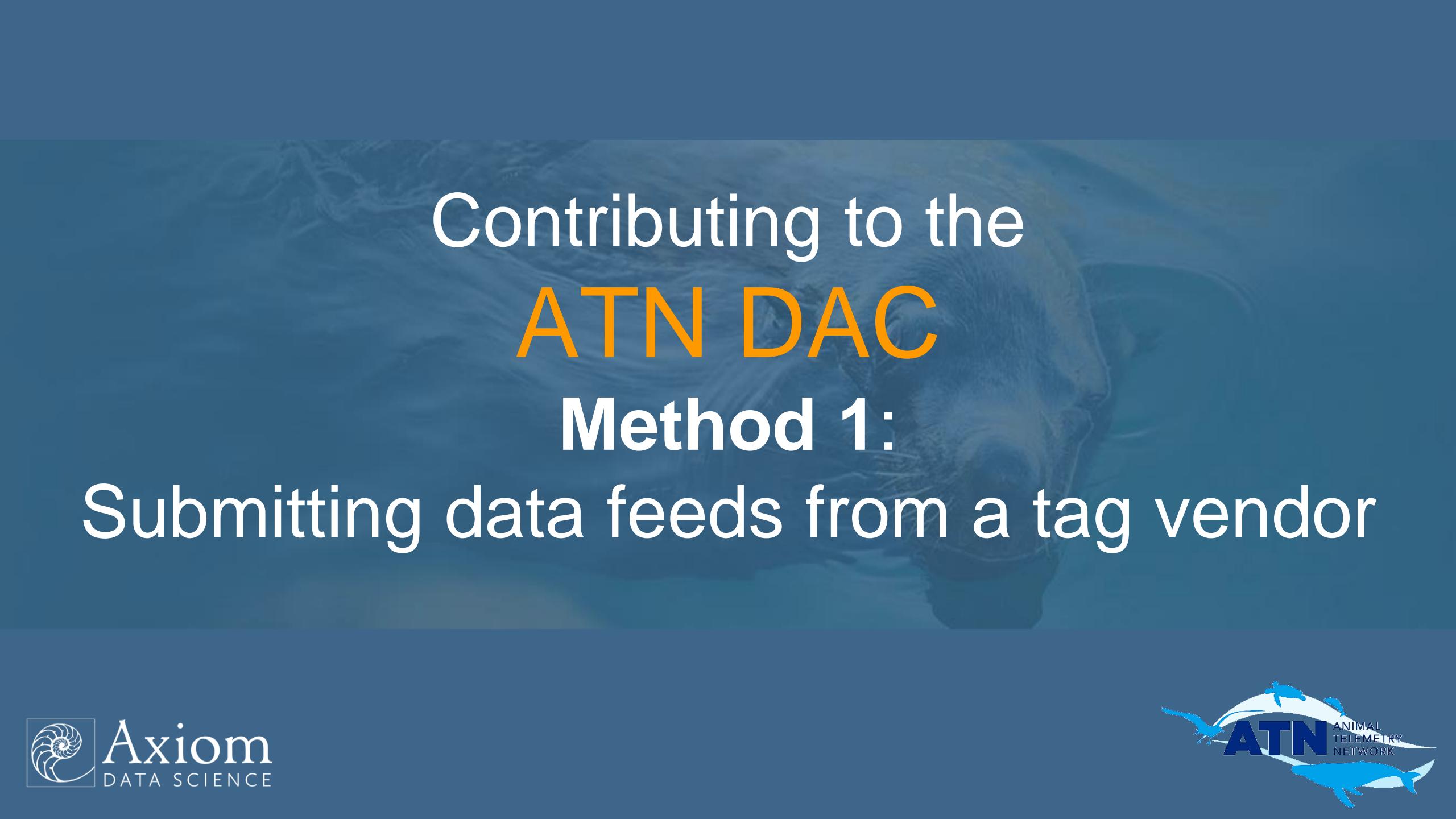


Metadata
in
Reg App



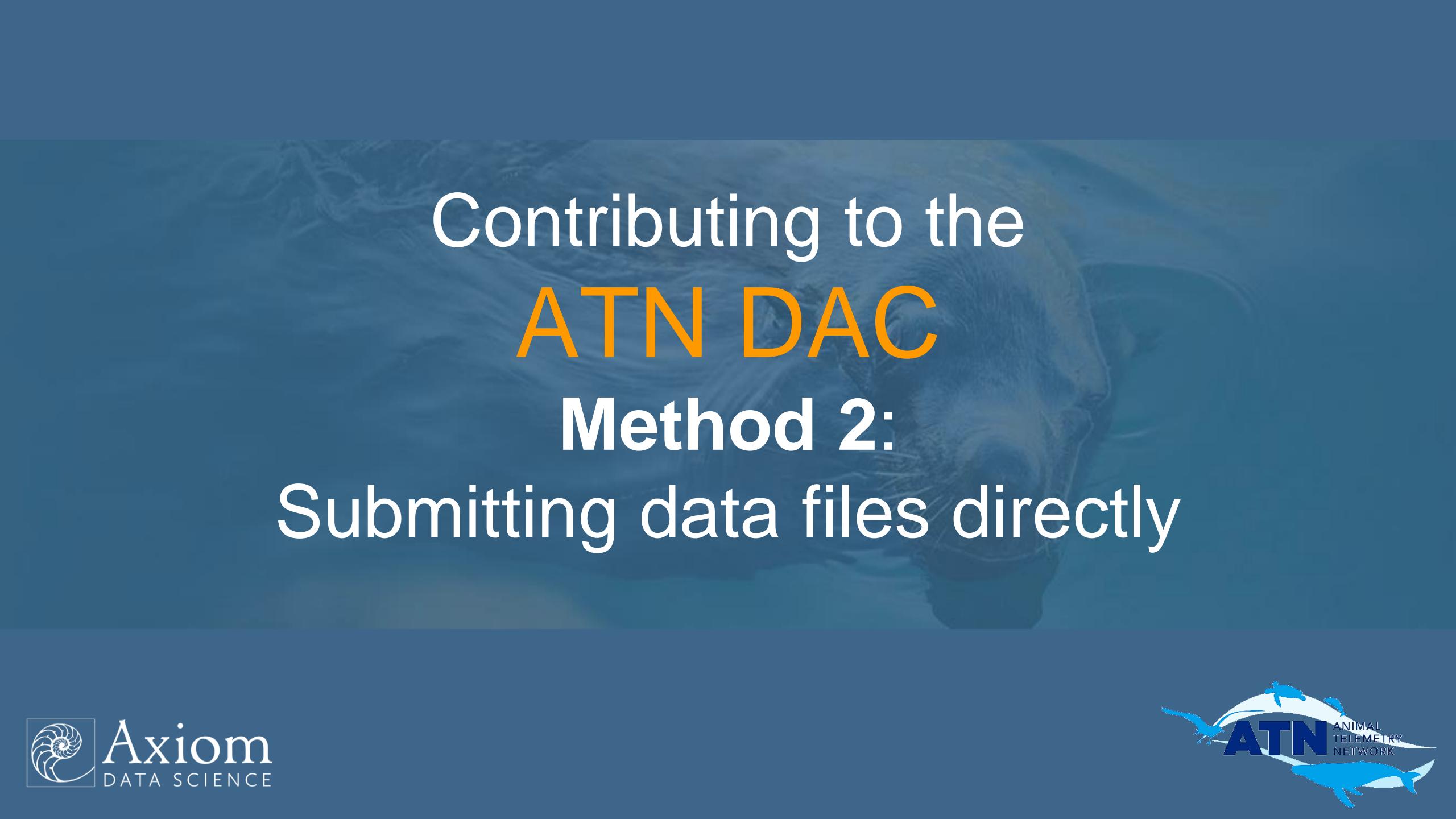
Data files
in
Workspace





Contributing to the ATN DAC

Method 1: Submitting data feeds from a tag vendor



Contributing to the ATN DAC Method 2: Submitting data files directly

ATN DAC Registration/Project Submission

Submit project-level metadata (e.g., title, abstract, contact information) and tag deployment records (e.g., PTT ID, species, deployment dates).

Email:

Password:

OR

 Sign in with Google

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New here? You can create an account with your email or sign in with Google to create an account.

RESEARCH△WORKSPACE

Request more information 

Login 

The Research Workspace is a web-based platform for collaboratively managing science projects through the entire data lifecycle. Whether you are a research scientist, data manager, or program manager you can benefit from using the Research Workspace. Coordinate information transfer, create and execute reproducible numerical workflows, generate metadata and publish finalized data products to national archives all through a single application.

Animal Telemetry Network Data Portal



EXPLORE MAP



PROJECTS



All Tag Deployments

Real-time Tag Deployments:
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Search

Type Project...   11-20 of 83 results  

All 2,275

Data Layers 6

Project data 83

Moving platforms 2,146

More

Advanced

Central California White Shark Tracking: 2018-2020

White sharks make large scale migrations across the northeast Pacific, predictably utilizing coastal aggregation sites and an offshore area called the White Shark Cafe. The White Shark Cafe represents a unique biological and oceanographic feature in a vast ocean. With the support of CENCOOS, we use satellite-tagged animals to track the annual position and characteristics of this important and unique pelagic resource.

 Principal Investigator: Barbara Block

 Add project to map +



Tags

ATN Project

83

Sharks

2

Whales

2

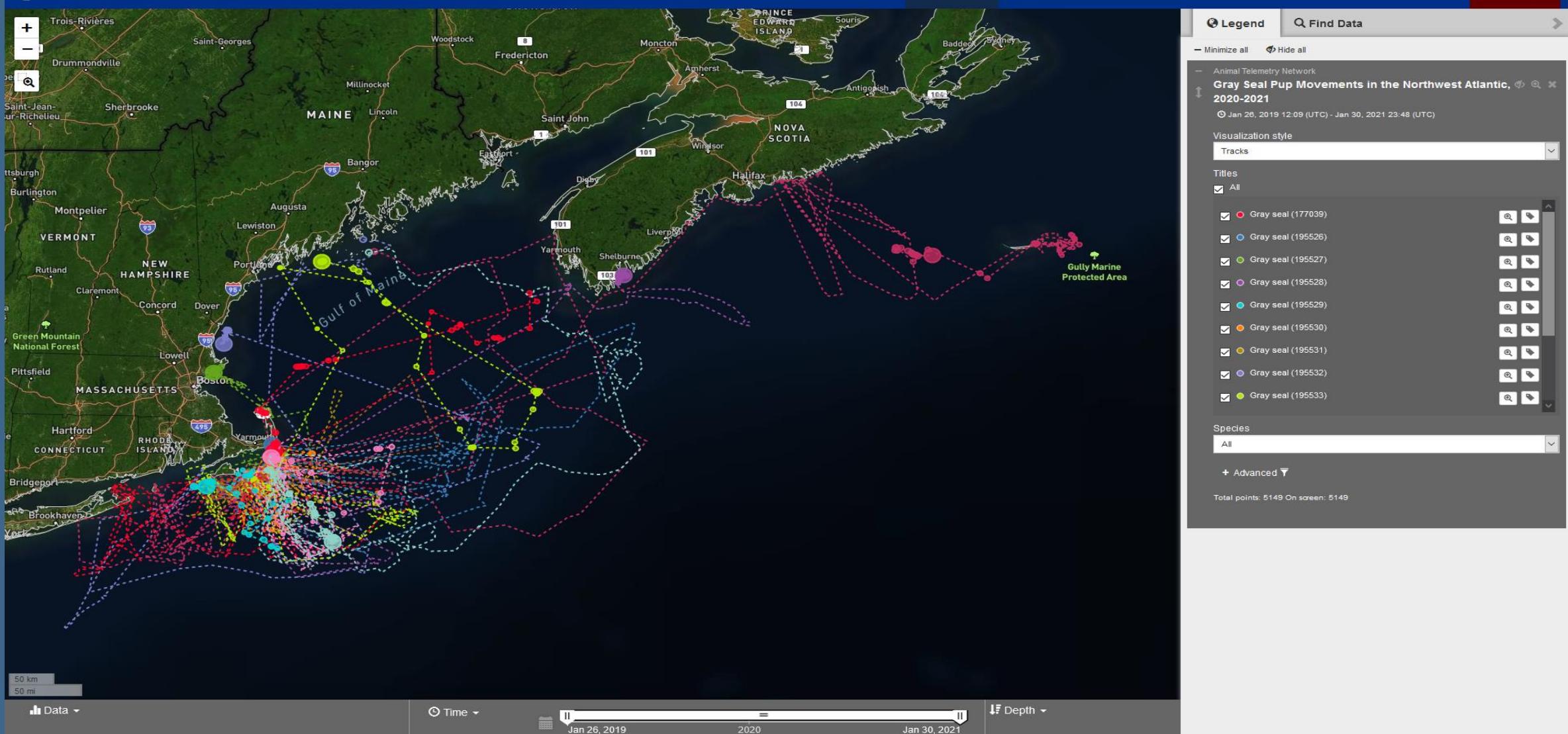
Common Murre tracking, Oregon Coast, 2015-2017

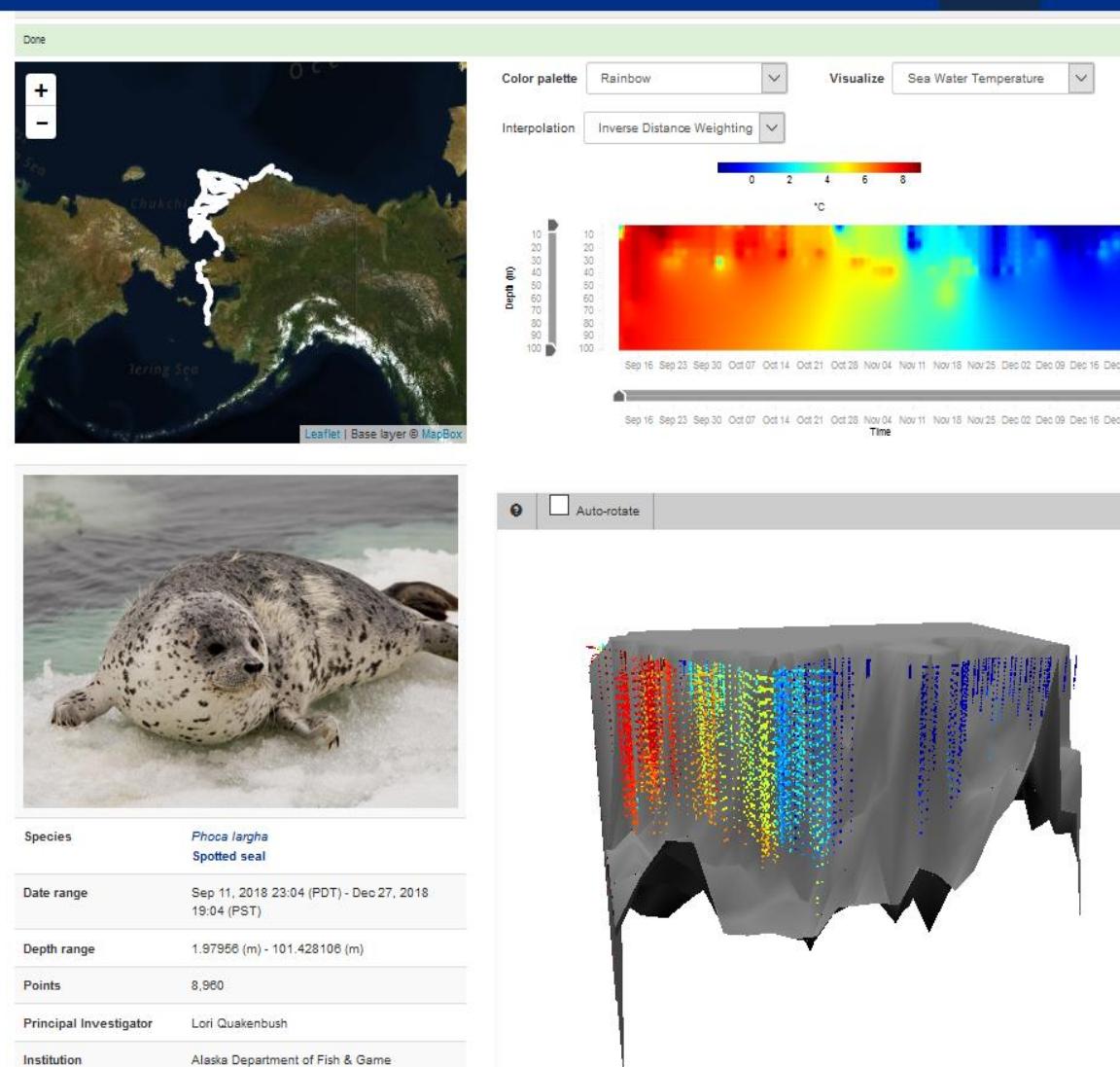
Common murres (*Uria aalge*) are an abundant marine predator in the California Current System (SSC) yet knowledge gaps exist in colony-associated movements, habitat-use of non-breeding individuals, diel dive patterns, and post-breeding movements. In the summer of 2015-2017 and fall of 2016 and 2017, we captured 24 common murres at sea, immediately adjacent to Yaquina Head, the largest murre colony in Oregon, USA. We fitted birds with 17 g batter...

 Principal Investigator: Rachael Orben

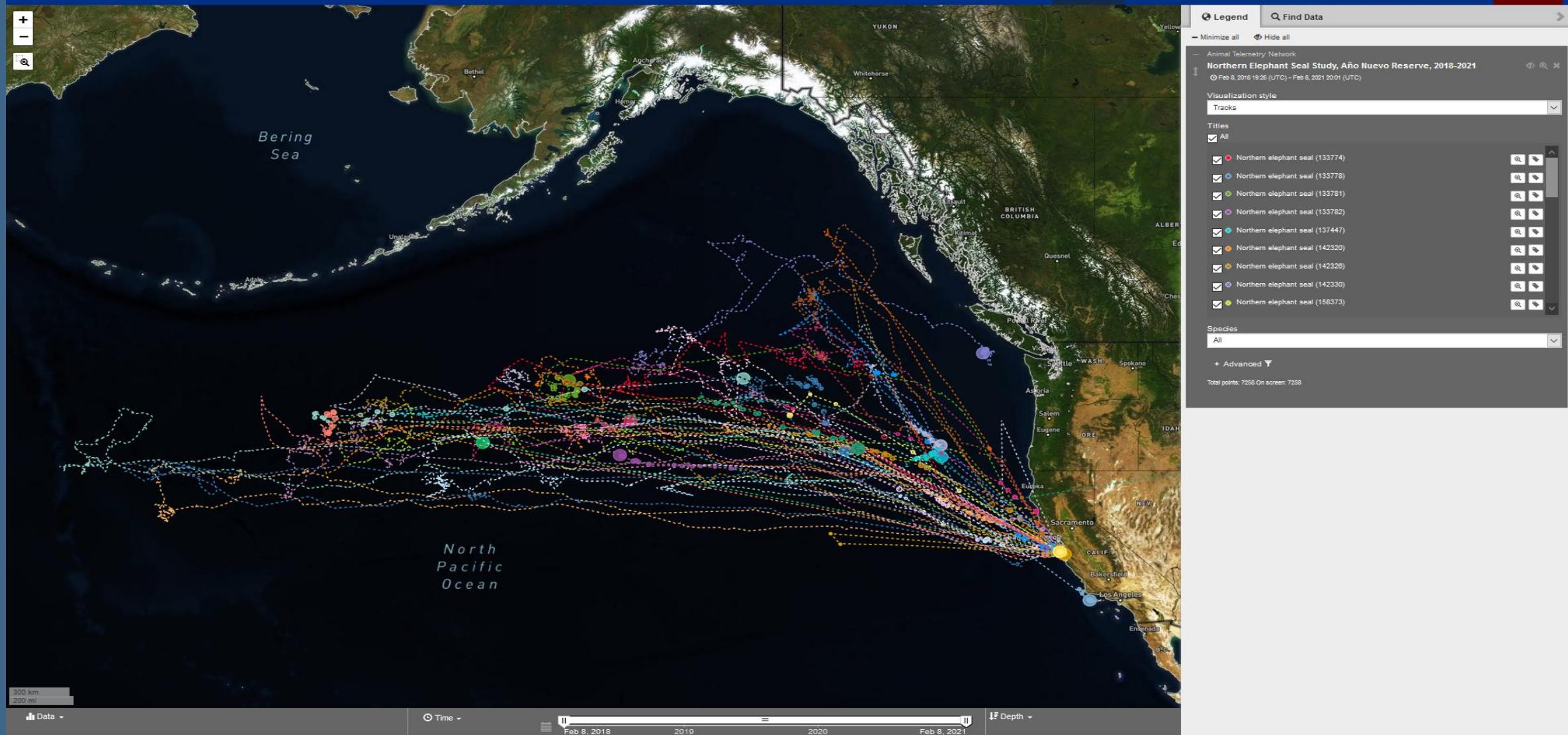
 Add project to map +







Profile view



[Clear all filters](#)Search ?

Search phrase

Datasets 1 to 25 of 35

1 2 Next

Sort by Most recent

My Search

telemetry x

Data source: Research Workspace

Filter by:

Data attribute

Annotation

Data files

Member Node

Creator

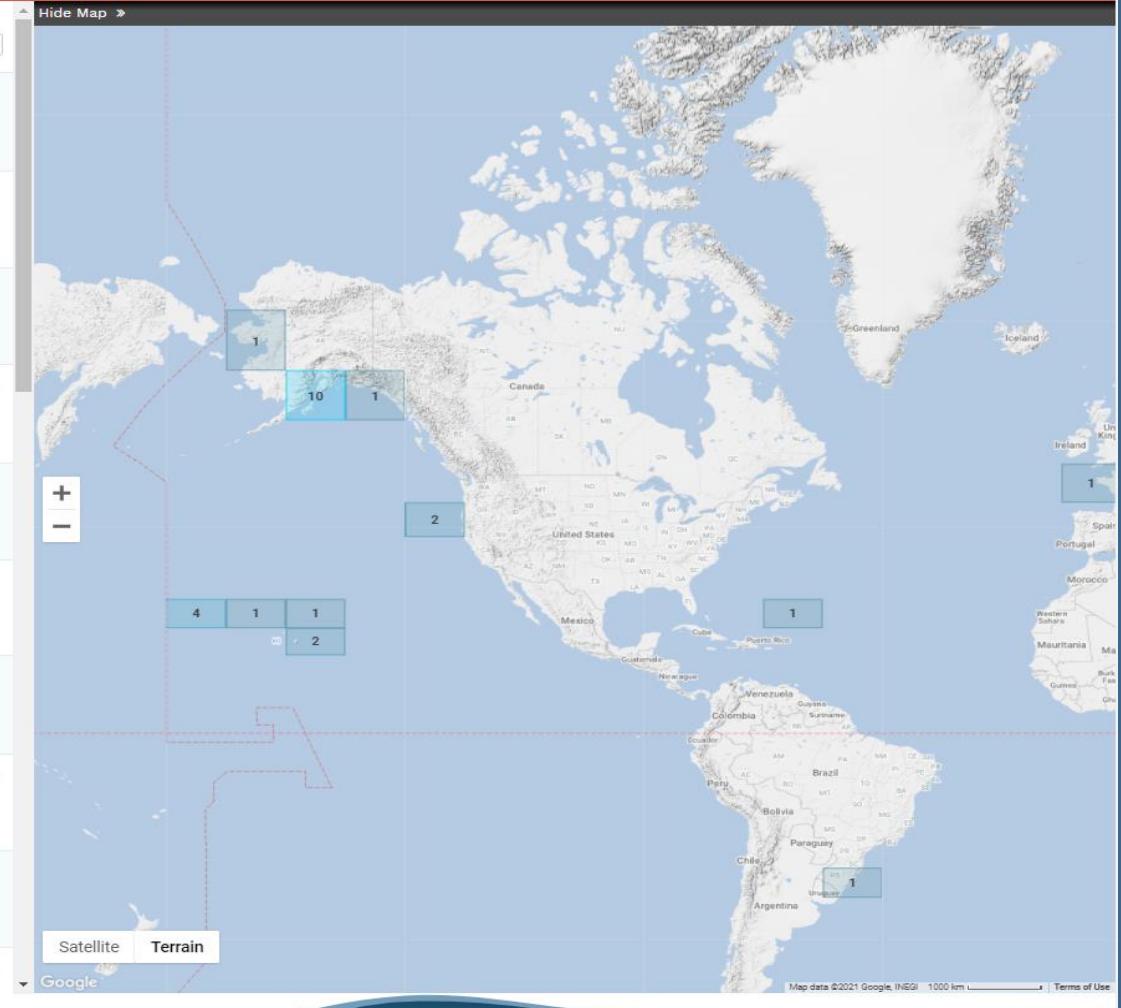
Year

Identifier

Taxon

Location

-  Erin Oleson and Marie Hill. **Satellite tag deployment and telemetry location data from 2 adult false killer whales (*Pseudorca Crassidens*) tagged within Hawaii's Papahānaumokuākea Marine National Monument (May–October 2013).** Research Workspace. 10.24431/rw1k47j, version: 10.24431_rw1k47j_20201215T233153Z.
-  Erin Oleson and Marie Hill. **Hawaiian Islands Cetacean and Ecosystem Assessment Survey (HICEAS) satellite telemetry data, 2017.** Research Workspace. 10.24431/rw1k47l, version: 10.24431_rw1k47l_20201215T185844Z.
-  Erin Oleson and Marie Hill. **Hawaiian Islands – Technology for the Ecology of Cetaceans (HI-TEC) satellite telemetry data, 2016.** Research Workspace. 10.24431/rw1k47k, version: 10.24431_rw1k47k_20201215T185838Z.
-  Stephanie Loredo, Rachael Orben, Robert Suryan, Josh Adams, Shawn Stephensen, et al. **Satellite tracking of Common murres (*Uria aalge*) in the northern California Current System, 2015–2017.** Research Workspace. 10.24431/rw1k47i, version: 10.24431_rw1k47i_20201211T201935Z.
-  Randall Wells, Leo Berninsone, and Marta Cremer. **Franciscana movements from satellite-linked telemetry in Argentina and Brazil, 2006–2013.** Research Workspace. 10.24431/rw1k47h, version: 10.24431_rw1k47h_20201201T194948Z.
-  Stacie Robinson and Charles Littnan. **Main Hawaiian Islands Monk Seal Recovery Activities 2003 – 2019.** Research Workspace. 10.24431/rw1k47f, version: 10.24431_rw1k47f_20201204T192031Z.
-  Stacie Robinson, Frank Parrish, Kyler Abernathy, Brent Stewart, and George Antonelis. **Satellite Telemetry Study of Hawaiian Monk Seal Foraging Ecology: Northwestern Hawaiian Islands, 1996–2002.** Research Workspace. 10.24431/rw1k47e, version: 10.24431_rw1k47e_20201204T192030Z.
-  Stacie Robinson and Charles Littnan. **Northwestern Hawaiian Islands Monk Seal Foraging Ecology 2007 – 2019.** Research Workspace. 10.24431/rw1k47d, version: 10.24431_rw1k47d_20201204T192008Z.
-  Stacie Robinson, Charles Littnan, and Tenaya Norris. **Northwestern Hawaiian Islands Monk Seal Translocation 2007 – 2019.** Research Workspace. 10.24431/rw1k47c, version: 10.24431_rw1k47c_20201204T192002Z.
-  Stacie Robinson, Charles Littnan, and Tenaya Norris. **Northwestern Hawaiian Islands Monk Seal Rehabilitation Release 2007 – 2019.** Research Workspace. 10.24431/rw1k47b, version: 10.24431_rw1k47b_20201204T191940Z.



Axiom
DATA SCIENCE

Also, access to data & archive



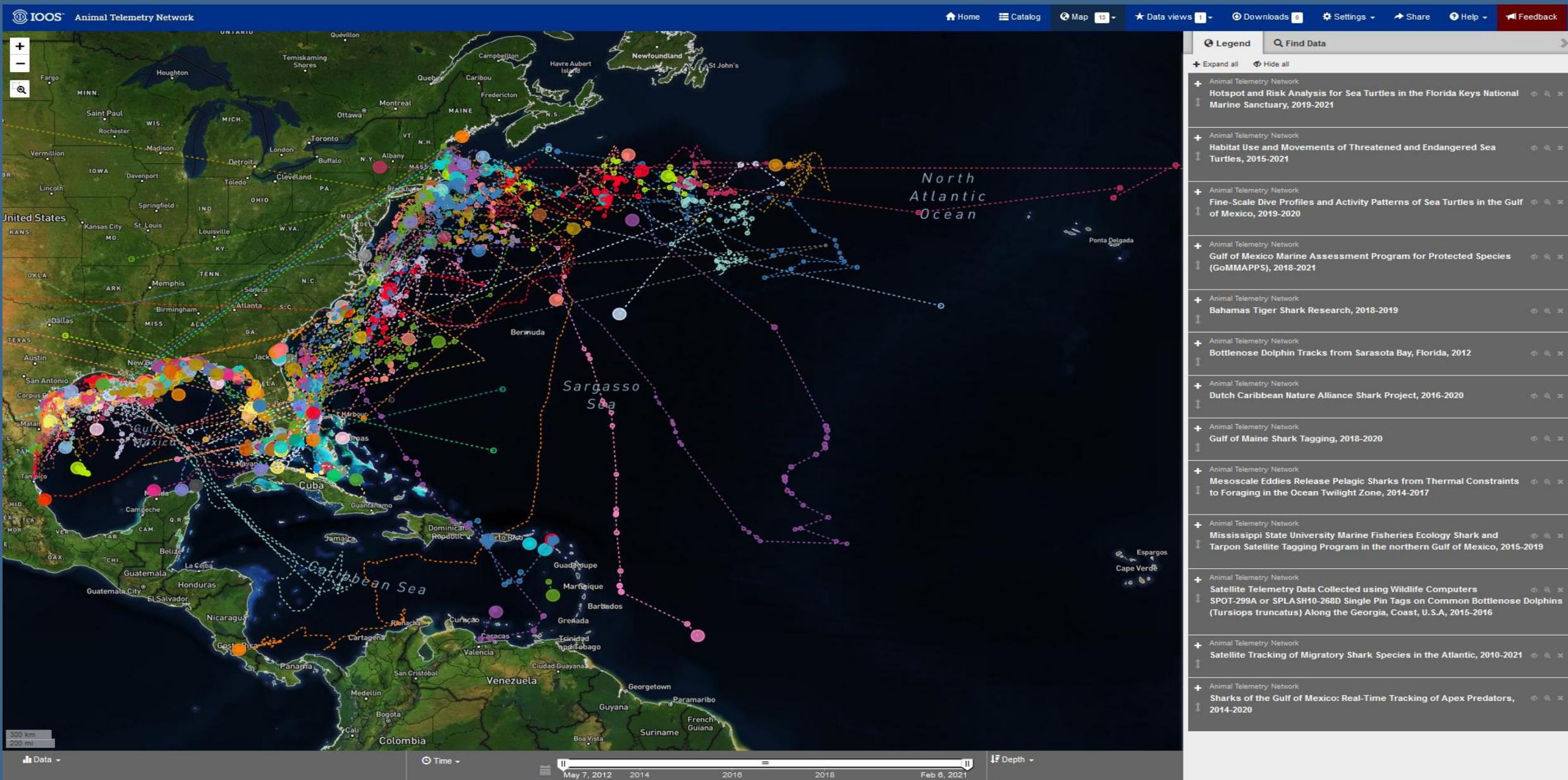
BIOTRACK

Collaborative, multi-species synthesis project that seeks to assess and monitor hotspots of marine megafauna biodiversity by linking satellite telemetry data with remotely sensed environmental data on multiple EOVs and geographic "seascapes".

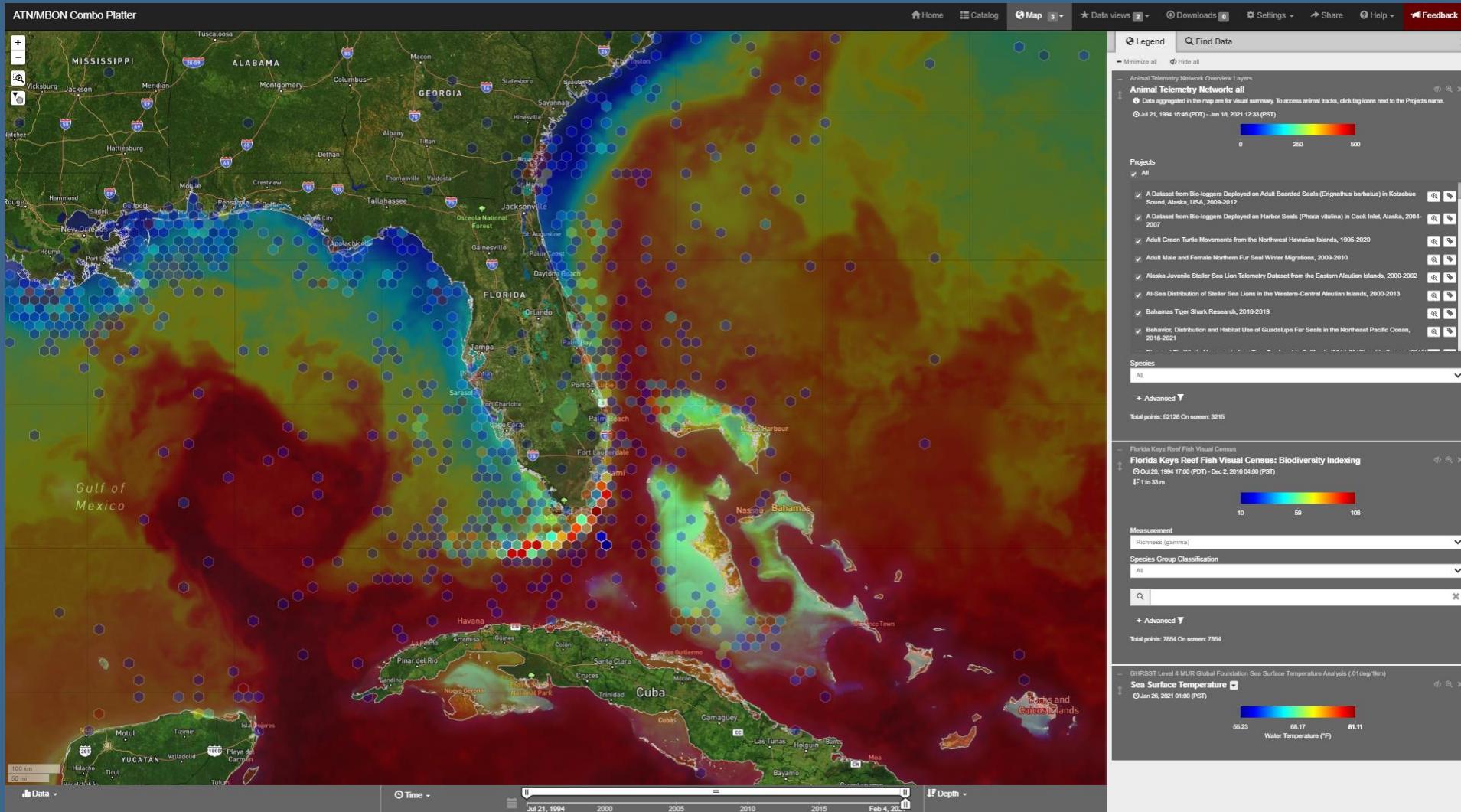
- Led by Dr. Neil Hammerschlag & PhD student Chelsea Black, Uni. Miami-RSMAS
- Western North Atlantic, Gulf of Mexico and Caribbean Sea
- So far...21 confirmed collaborators from 15 organizations
- Data from...22 projects, 613 deployments and 23 species
- [BioTrack - IOOS MBON Project Site \(marinebon.org\)](#)



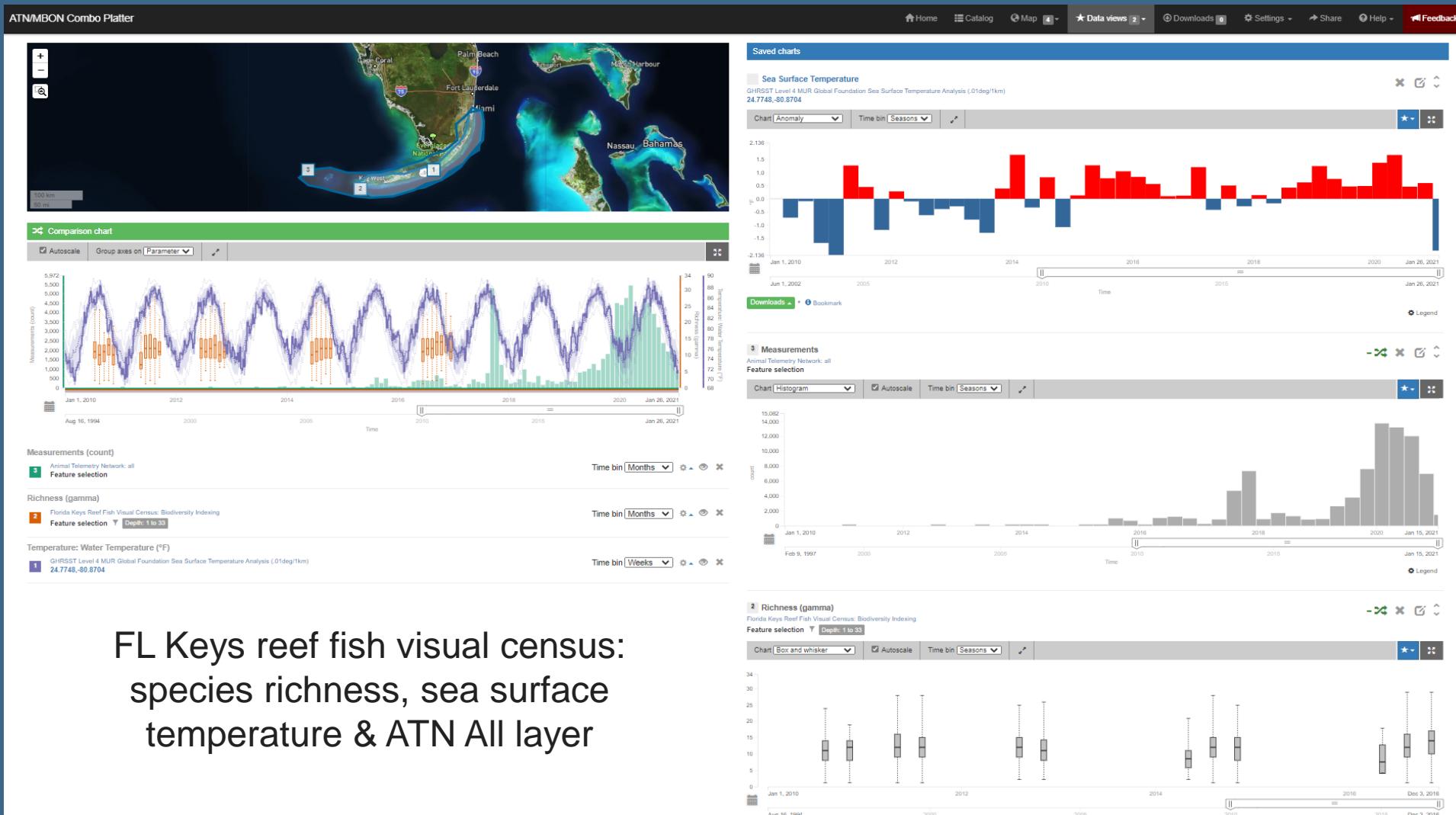
BIOTRACK



LINKING ATN + MBON + IOOS SENSOR

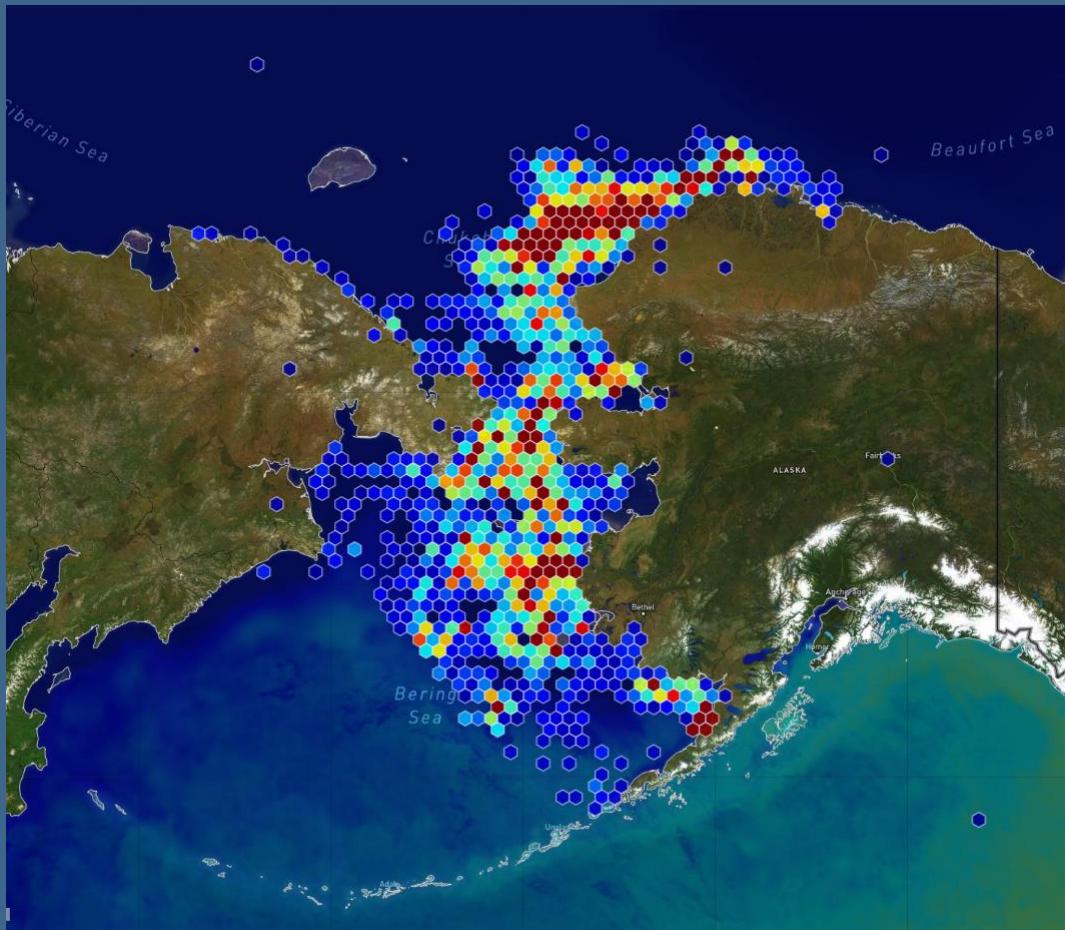


LINKING ATN + MBON + IOOS SENSOR

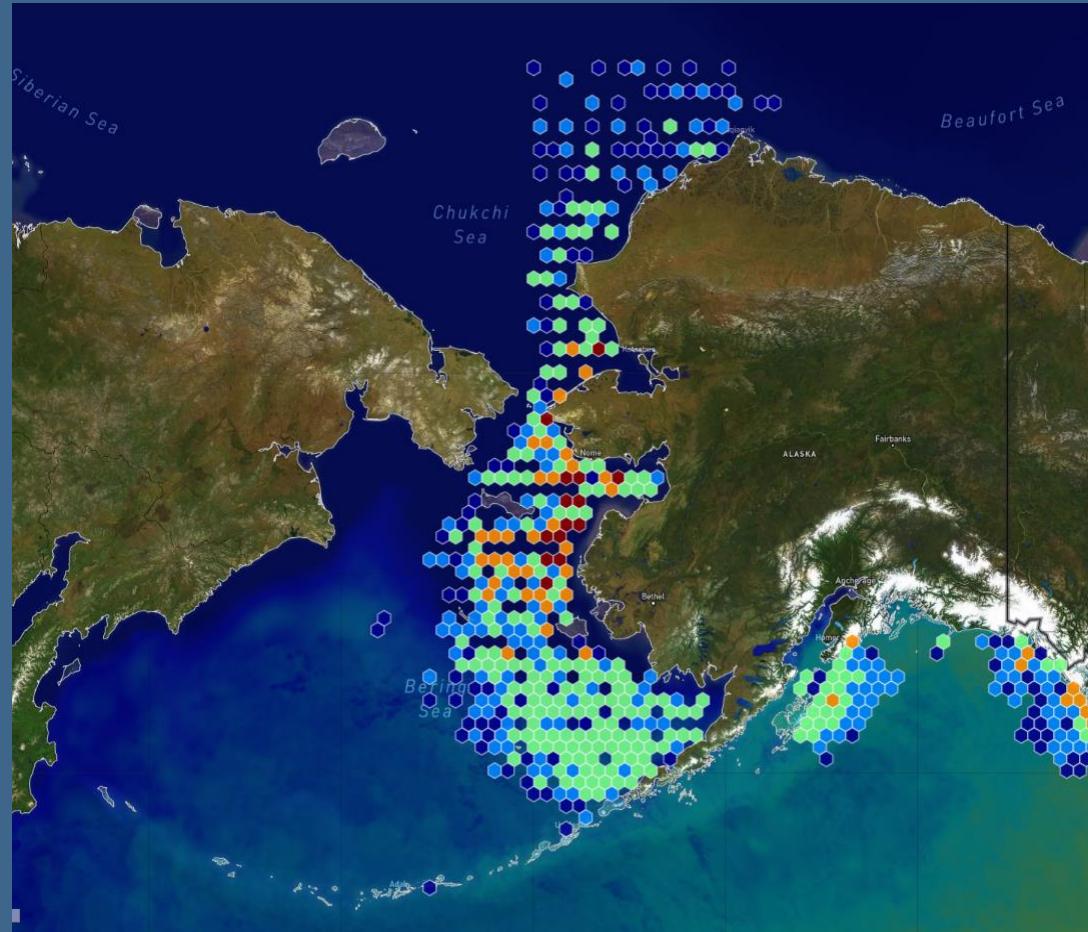


FL Keys reef fish visual census:
species richness, sea surface
temperature & ATN All layer

LINKING ATN + MBON + IOOS SENSOR



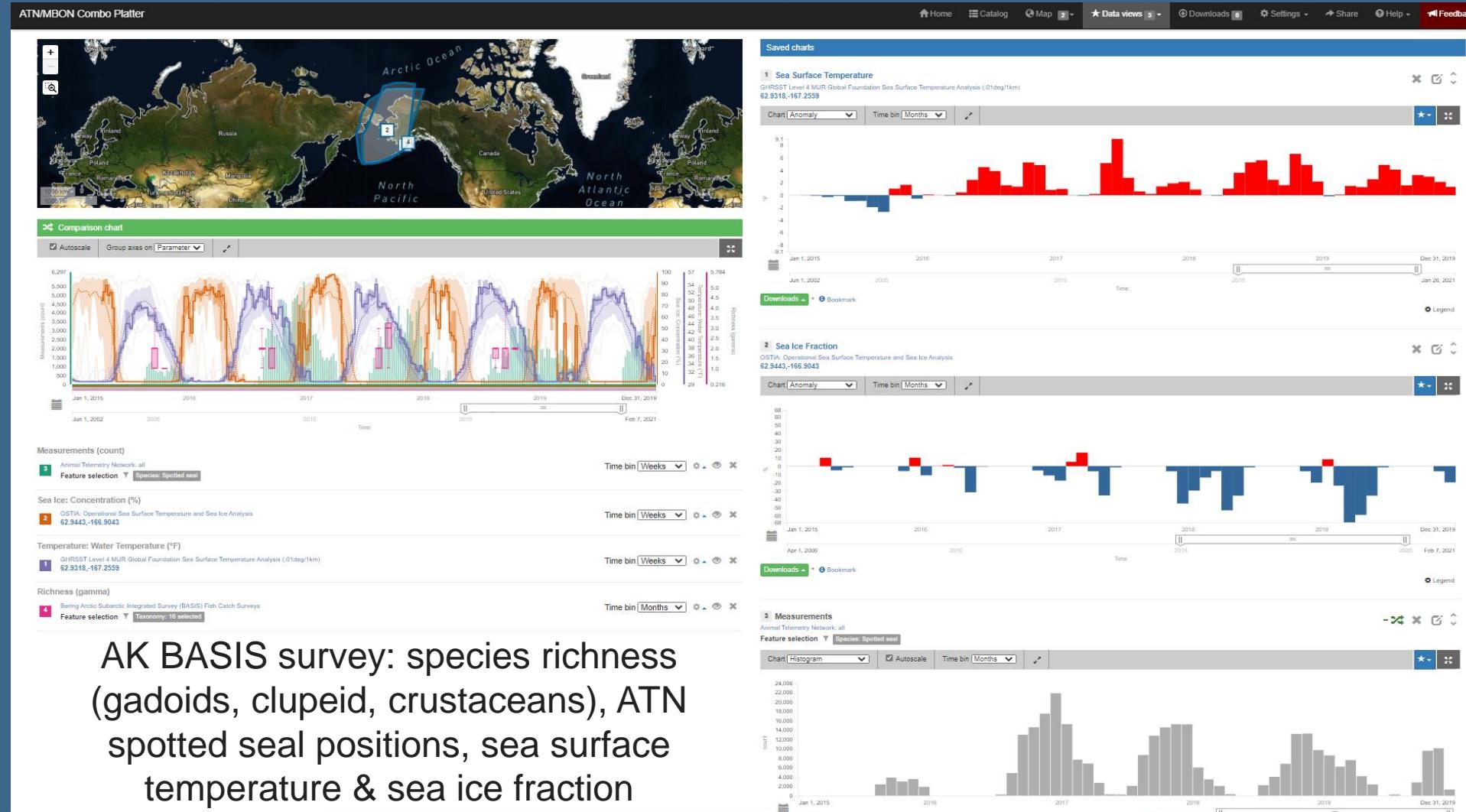
Spotted seal positions



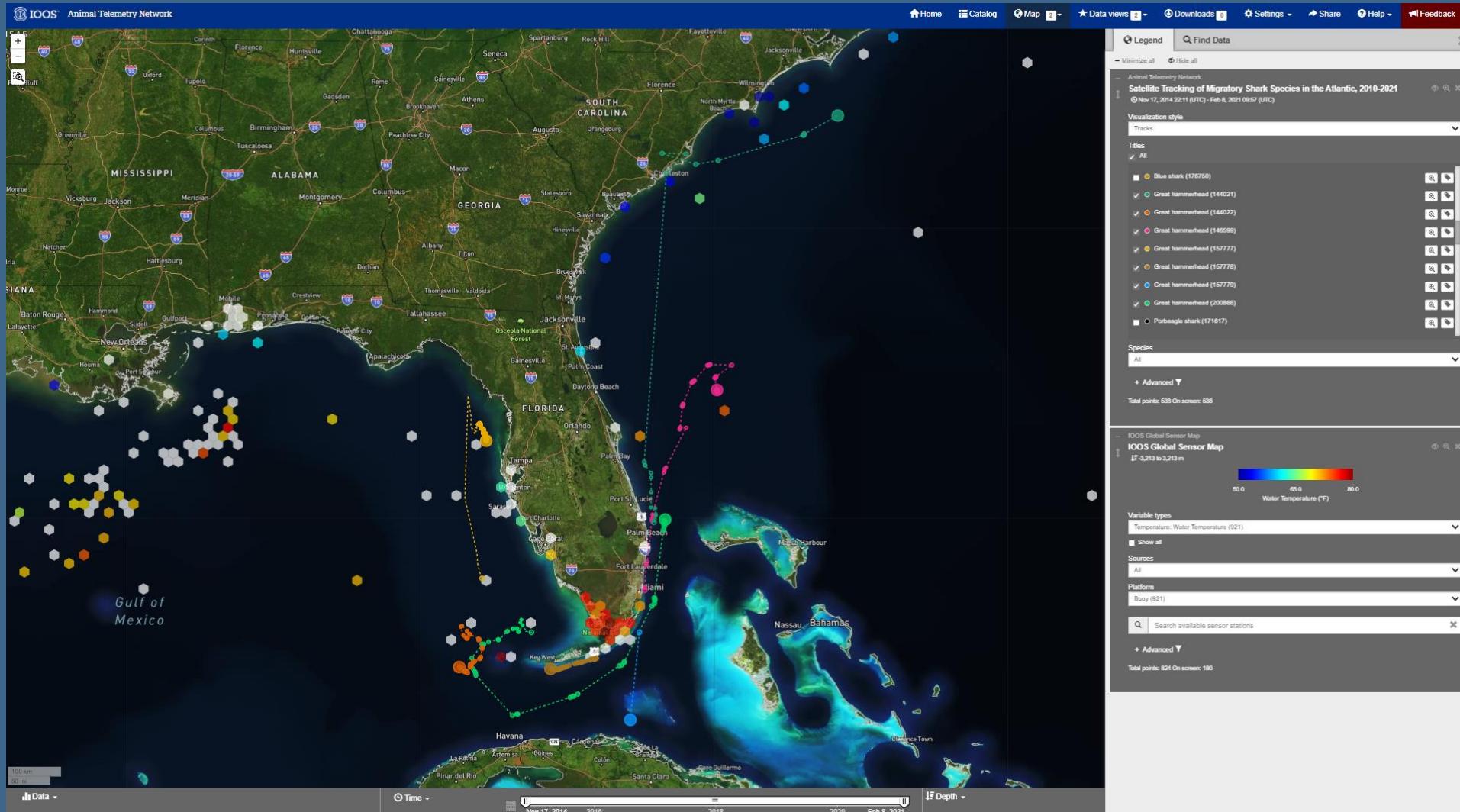
BASIS survey - species richness



LINKING ATN + MBON + IOOS SENSOR



LINKING ATN + MBON + IOOS SENSOR



LINKING ATN + MBON + IOOS SENSOR

Animal Telemetry Network

★ Great hammerhead shark (200866) + IOOS sensors -- Water Temp

Bouy	Date Time	Sea Water Temp	Depth	Bouy	Date Time	Sea Water Temp	Depth
Station	UTC	°Celsius	m	Station	UTC	°Celsius	m
FWYF1	2020-05-01T00:00:00Z	26.4	0	GKYF1	2020-05-01T00:00:00Z	28.17	0
FWYF1	2020-05-01T01:00:00Z	26.4	0	GKYF1	2020-05-01T01:00:00Z	28.11	0
FWYF1	2020-05-01T02:00:00Z	26.3	0	GKYF1	2020-05-01T02:00:00Z	27.85	0
FWYF1	2020-05-01T03:00:00Z	26.3	0	GKYF1	2020-05-01T03:00:00Z	27.83	0
FWYF1	2020-05-01T04:00:00Z	26.4	0	GKYF1	2020-05-01T04:00:00Z	27.77	0
FWYF1	2020-05-01T05:00:00Z	26.3	0	GKYF1	2020-05-01T05:00:00Z	27.58	0
FWYF1	2020-05-01T06:00:00Z	26.3	0	GKYF1	2020-05-01T06:00:00Z	27.56	0
FWYF1	2020-05-01T07:00:00Z	26.2	0	GKYF1	2020-05-01T07:00:00Z	27.38	0
FWYF1	2020-05-01T08:00:00Z	26.2	0	GKYF1	2020-05-01T08:00:00Z	27.2	0
FWYF1	2020-05-01T09:00:00Z	26.1	0	GKYF1	2020-05-01T09:00:00Z	27.17	0
FWYF1	2020-05-01T10:00:00Z	26	0	GKYF1	2020-05-01T10:00:00Z	26.91	0
FWYF1	2020-05-01T11:00:00Z	25.9	0	GKYF1	2020-05-01T11:00:00Z	27.09	0
FWYF1	2020-05-01T12:00:00Z	25.8	0	GKYF1	2020-05-01T12:00:00Z	26.93	0
FWYF1	2020-05-01T13:00:00Z	25.8	0	GKYF1	2020-05-01T13:00:00Z	27.1	0
FWYF1	2020-05-01T14:00:00Z	25.8	0	GKYF1	2020-05-01T14:00:00Z	27.18	0
FWYF1	2020-05-01T15:00:00Z	26	0	GKYF1	2020-05-01T15:00:00Z	27.25	0
FWYF1	2020-05-01T16:00:00Z	26.1	0	GKYF1	2020-05-01T16:00:00Z	27.35	0
FWYF1	2020-05-01T17:00:00Z	26.2	0	GKYF1	2020-05-01T17:00:00Z	27.39	0
FWYF1	2020-05-01T18:00:00Z	26.2	0	GKYF1	2020-05-01T18:00:00Z	27.58	0
FWYF1	2020-05-01T19:00:00Z	26.3	0	GKYF1	2020-05-01T19:00:00Z	27.82	0
FWYF1	2020-05-01T20:00:00Z	26.4	0	GKYF1	2020-05-01T20:00:00Z	28.06	0
FWYF1	2020-05-01T21:00:00Z	26.6	0	GKYF1	2020-05-01T21:00:00Z	8.11	0
FWYF1	2020-05-01T22:00:00Z	26.4	0	GKYF1	2020-05-01T22:00:00Z	0	0
FWYF1	2020-05-01T23:00:00Z	26.4	0	GKYF1	2020-05-02T00:00:00Z	27.69	0
FWYF1	2020-05-02T00:00:00Z	26.2	0	GKYF1	2020-05-02T01:00:00Z	27.69	0
FWYF1	2020-05-02T01:00:00Z	26	0	GKYF1	2020-05-02T02:00:00Z	27.69	0
FWYF1	2020-05-02T02:00:00Z	25.9	0	GKYF1	2020-05-02T03:00:00Z	27.51	0
FWYF1	2020-05-02T03:00:00Z	26.2	0	GKYF1	2020-05-02T04:00:00Z	27.49	0
FWYF1	2020-05-02T04:00:00Z	26.2	0	GKYF1	2020-05-02T05:00:00Z	27.42	0
FWYF1	2020-05-02T05:00:00Z	26.2	0	GKYF1	2020-05-02T06:00:00Z	27.33	0
FWYF1	2020-05-02T06:00:00Z	26.2	0	GKYF1	2020-05-02T07:00:00Z	27.34	0
FWYF1	2020-05-02T07:00:00Z	26.1	0	GKYF1	2020-05-02T08:00:00Z	27.1	0
FWYF1	2020-05-02T08:00:00Z	26.1	0	GKYF1	2020-05-02T09:00:00Z	26.97	0
FWYF1	2020-05-02T09:00:00Z	26.1	0	GKYF1	2020-05-02T10:00:00Z	26.89	0
FWYF1	2020-05-02T10:00:00Z	26	0	GKYF1	2020-05-02T11:00:00Z	26.93	0
FWYF1	2020-05-02T11:00:00Z	26	0	GKYF1	2020-05-02T12:00:00Z	27.04	0
FWYF1	2020-05-02T12:00:00Z	26	0	GKYF1	2020-05-02T13:00:00Z	26.94	0
FWYF1	2020-05-02T13:00:00Z	26	0	GKYF1	2020-05-02T14:00:00Z	27.02	0
FWYF1	2020-05-02T14:00:00Z	26	0	GKYF1	2020-05-02T15:00:00Z	27.05	0
FWYF1	2020-05-02T15:00:00Z	26.2	0	GKYF1	2020-05-02T16:00:00Z	27.16	0
FWYF1	2020-05-02T16:00:00Z	26.3	0	GKYF1	2020-05-02T17:00:00Z	27.35	0

Saved charts

1 Temperature: Water Temperature
NOAA National Data Buoy Center (NDBC)
FWYF1 - Fowey Rock, FL

2 Temperature: Water Temperature
Everglades National Park

Downloads ERDDAP Dataset Charts Metadata CSV Download NetCDF Download Calculated data Binned months Download View

Direct access to data downloads

Have questions, get in touch

Bill Woodward, ATN Network Coordinator

bill.woodward@noaa.gov

Megan McKinzie, ATN Data Coordinator

mmckinzie@mbari.org

Ian Gill, Axiom Data Coordinator

ian@axiomdatascience.com

Resources

portal.atn.ioos.us/help/

researchworkspace.com/help/

 Feedback

 Feedback

Feedback buttons for technical issues



Introducing **X-MBON Working Group**

Neil Hammerschlag (UM/RSMAS), Bill Woodward (NOAA/IOOS), Megan McKinzie (ATN/MBARI)

Towards a BioTrack Working Group

- Goals:
 - Analysis and visualization of metrics useful for stakeholders and managers
 - Create MBON-ATN biodiversity data processes and products
 - Establish linked research priorities/activities
 - Increase participation in BioTrack

BioTrack WG: Join US

- Meet every 2-3 months
- Share updates and ideas towards goals
- inputs/presentations from stakeholders & members
- Evaluate progress

BioTrack WG: Join US

- Focus on:
 - Identifying and organizing stakeholders
 - Evaluating metrics for biodiversity assessments
 - Analytical approaches
 - Data visualization and products
 - Integration with other MBON datasets
(soundscapes, seascapes, eDNA)

Join the BioTrack WG?

Neil Hammerschlag nhammerschlag@miami.edu

Bill Woodward bill.woodward@noaa.gov

