

Lightning Talks Introducing Data Repositories and (Meta)data Aggregators

presenting: Arctic Data Center, DataONE, Environmental Data Initiative, ESIP, GBIF, iDigBio, NEON

#datahelpdesk

Ecological Society of America 2019 ESAUSSEE

Career Fair Center in the Exhibit Hall <https://esa.org/louisville/career-fair/>

Wednesday 14 August 330-430 PM

<http://bit.ly/datahelpesa2019>





Data Archive



Portal for data discovery



Tools for data and metadata submission



Support services



Training and Outreach



Data Rescue



5,800
DATA SETS



1,500
CREATORS



725K
DATA FILES



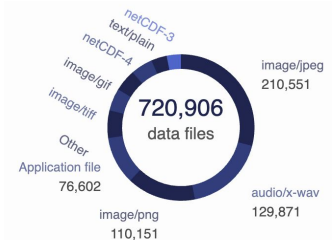
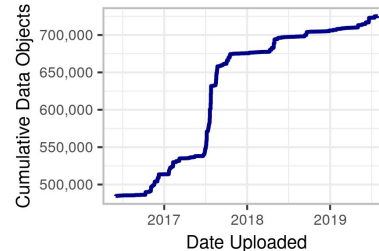
14,000
USERS



34 TB
DATA STORAGE



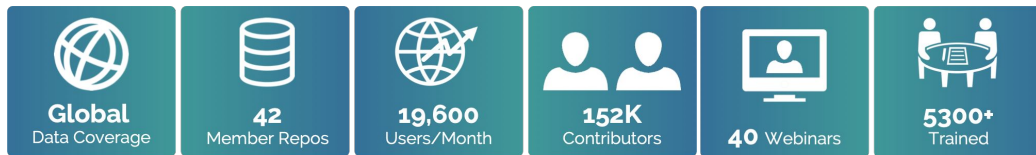
990K+
FILE DOWNLOADS



Enabling Access and Use of Data About Life and the Environment

Products and Services include:

- Faceted Data Search and Discovery
- Provenance Capture and Display
- Data Replication
- Data Science Training and Resources
- Metadata Quality Reporting
- Data Level Metrics
- Integrated DataONE Community



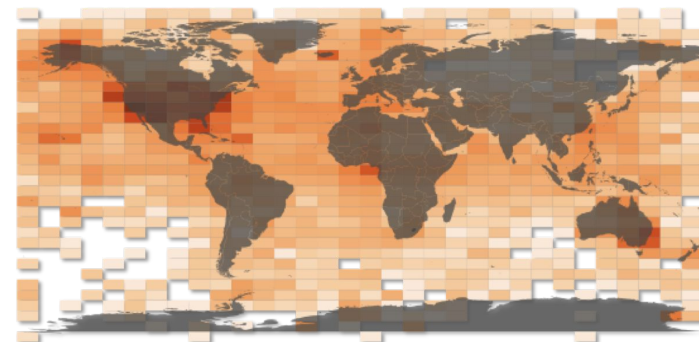
of content



metadata



data



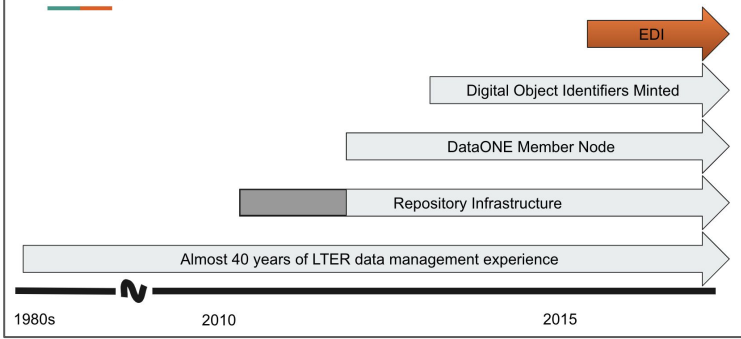
International network of repositories providing global data coverage



Environmental Data Initiative

- Data Archive
- Community Building
- Ecosystem Science

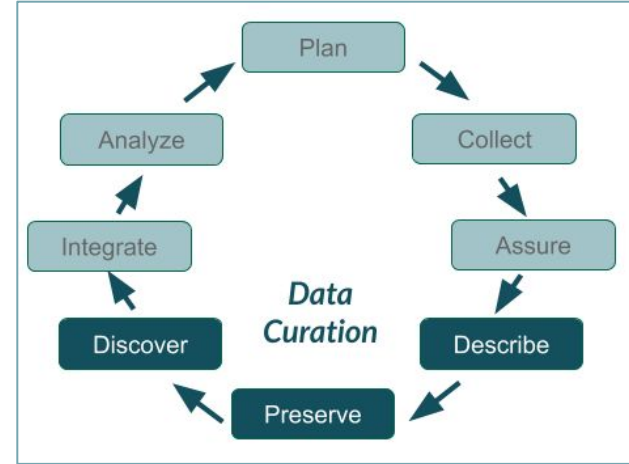
History - we are standing on the shoulders of giants



*EDI Activities:
Maintain a data archive*

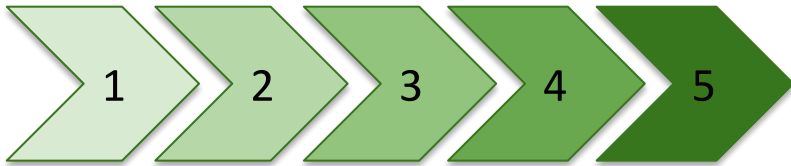
Train research groups in data curation and mgt.

Collaborate/leverage other work in environmental data management

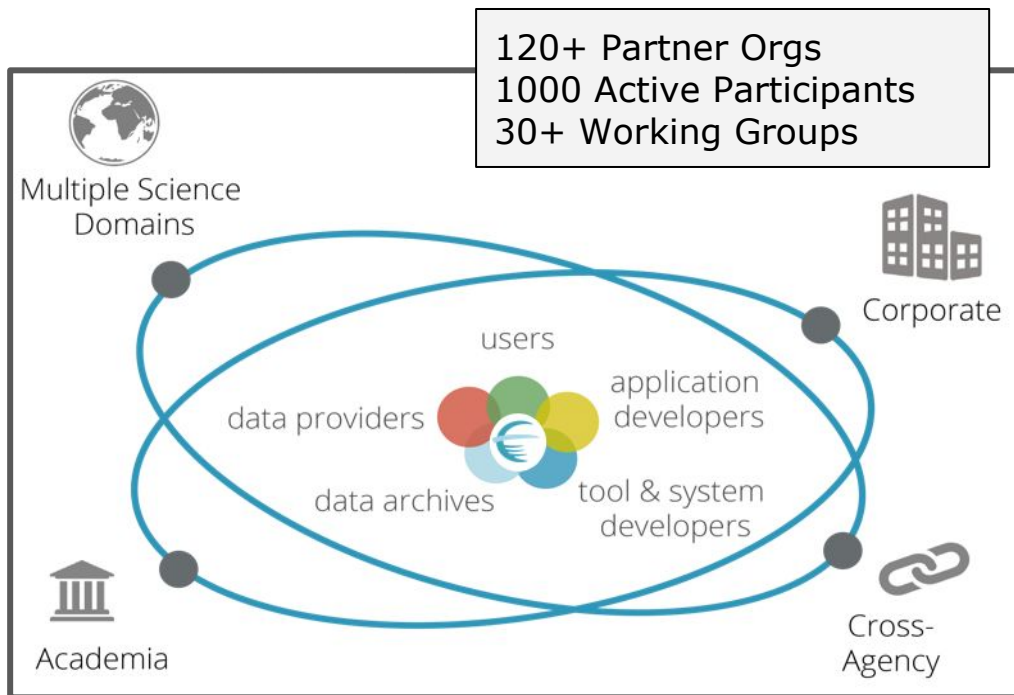


Data Contributor

1. Contact, plan
2. Assemble, organize
3. Prepare metadata
4. Upload
5. Access citation, DOI, published data



- A. Long-term, secure storage
- B. Discovery, access, cited, revisions
- C. Automated data checking
- D. Conforms to industry standards
- E. Workflows for data access & use
- F. Feedback to improve local practice



DISCOVER

Find people and tools to make your data findable, accessible, interoperable, and reusable.



COLLABORATE

Join-in or create a new collaboration area around your Earth science data challenges.



INNOVATE

Utilize small-grant funding to build or expand Earth data technologies.



NETWORK



Extend your network. Build connections across federal agencies, the private sector, and academia.

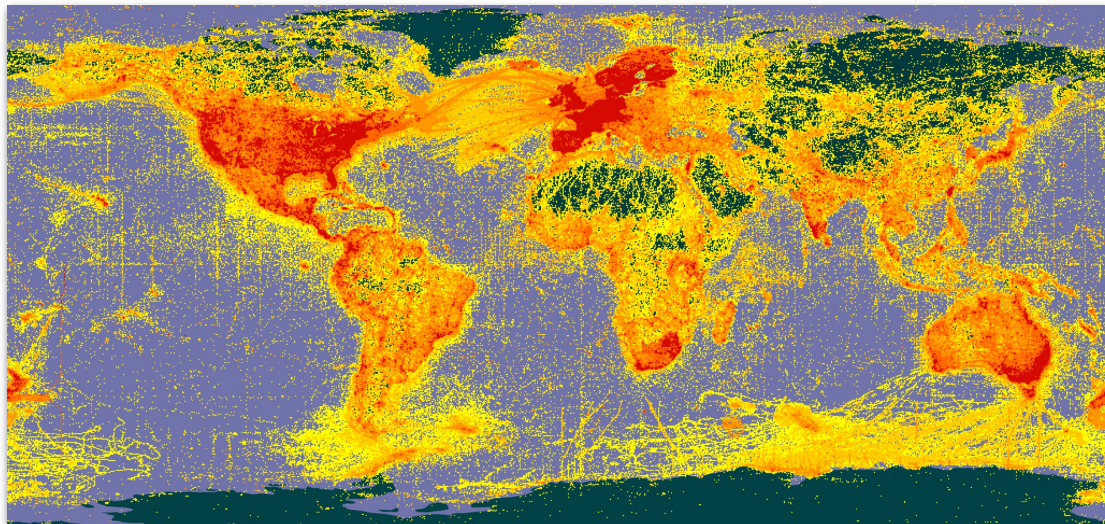
Free and open access to information about all types of life on Earth

- Which species or organism?
- Where and when was it found?
- What is the evidence?

International network and research infrastructure that provides free and open access to biodiversity data

Funded by participating national governments that have signed voluntary memorandum of understanding

58 countries
 **38** organizations
 **1,442** data publishers



GBIF Secretariat is ICSU-WDS CoreTrustSeal certified



20+ GBIF network members serve as trusted data hosting centres, serving national and thematic data and offering

- Consistent maintenance and administration of GBIF IPT
- Demonstrated track record of hosting data
- Capacity to provide help desk support

www.gbif.org



Advancing the Digitization of Biological Collections

iDigBio Hub and Thematic (Museum) Collection Networks

total: 119,768,942

Digitization

Workflows & Protocols
Dissemination

Research Use

Cyberinfrastructure
Tool collaboration
Portal development
ENM workshop

Research focus

Data quality
APIs

Training

Biodiversity informatics
Data skills and literacy
Collections software
Imaging
Project Management

www.idigbio.org

Search Records

search all fields

Must have media Must have map point

Filters Mapping Sorting Download

Add a field

State/Province: kentucky

Present Missing

Top 6 Taxa

- Cnidaria
- Empoasca empoasca
- Agallia constricta
- Paraphlepsius irroratus
- Fungaria
- other

LECTOTYPE ♀
Scelio niteus Brues
By L. Masner, 64

Education Outreach

Citizen Science
K-12 materials
Undergraduate
Fossil Clubs
Mentor teachers

Methods

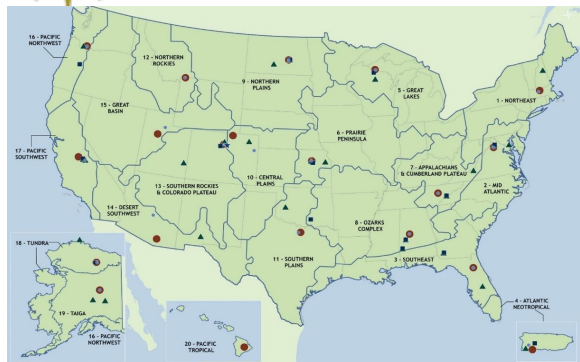
Workshops
Webinars
Symposia
Conferences
Working Groups
Short Courses
Adobe Connect
Listservs
Publications
Social Media @idigbio



neon
Operated by Battelle

National Ecological Observatory Network

Open data to understand our ecosystems



81 FIELD SITES
47 terrestrial, 34 aquatic

180 DATA PRODUCTS

100K SAMPLES/
SPECIMENS
Per year



Automated instruments

Micrometeorology (including C/H₂O/energy fluxes), surface and groundwater, and soil



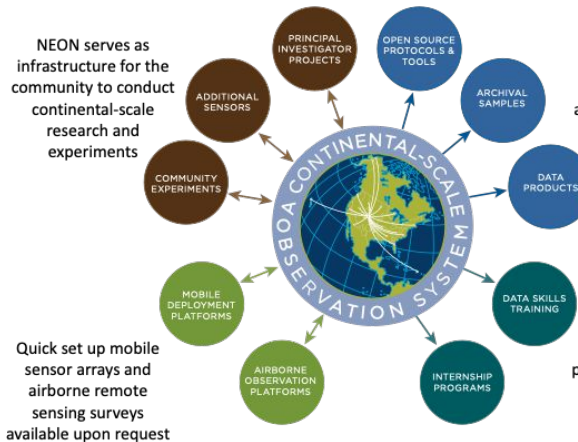
Observational sampling

Aquatic & terrestrial organisms, soils & sediments, biogeochemistry, geomorphology, etc.



Airborne remote sensing

Camera, hyperspectral, LiDAR imagery



NEON serves as infrastructure for the community to conduct continental-scale research and experiments

All NEON data, protocols and samples are openly available via the data portal and biorepository

Quick set up mobile sensor arrays and airborne remote sensing surveys available upon request

Resources and programs focused on engaging students, educators and the general public

For access to data, samples, field protocols, and assignable assets, visit <https://neonscience.org>



<i>Primary Activity</i>	<i>Primary Research Domain</i>	<i>Geographic Domain</i>	<i>Ask us about...</i>
Support networking for the data sci community	Earth, environmental science	global	Is there a collaboration group on [<i>my topic</i>]?
Aggregate search/delivery across many repositories	Earth, environmental, social science	global	How can [<i>my favorite repository</i>] become a node
Archive/deliver data	Any	Arctic	NSF requirements, how to submit data
Archive/deliver data	Environmental science, ecology	global	LTER; archiving for field stations, researchers, labs
Distributed network & global data infrastructure	biodiversity	global	Publishing records, citing and tracking data uses
Aggregate digitized museum specimen data	vouchered specimen collections, biodiversity	global	How to digitize, query data; foster data use
Monitoring network	Environmental science	United States	How to download NEON data

ESASUSSEE Data Help Desk

Find us (in the exhibit hall)

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ESASUSSEE 2019
Data Help Desk



Amber



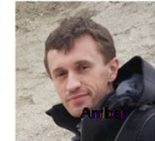
Christina



Christine



Deborah



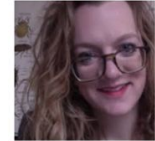
Dmitry



Jeanette



Karl



Kelsey



Kristin



Kyle



Laura



Margaret



Megan



Nico



Rebekah



Stevan



William



Operated by Battelle