GBIF for research stations

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Photo: skoppelo, Kilpisjärvi station, Finland
https://www.flickr.com/photos/skoppelo/45281740/in/photolist-jjHSPg-515FE
The research data lifecycle

Generate / Access
(re)Organize
Modify
Analyze
Archive
Cite
All samples and specimens will be destroyed at some point, maybe data, too, but digitization increase the use and lifetime.

... but digitization and data publishing is also form of digital security for heritage knowledge.
Intergovernmental open data infrastructure

Funded by the governments of the participant countries

Network for free and open access to biodiversity data

96 participants:
58 countries and 38 organisations

What species?
Where was it found?
When was it found?
What is the evidence?

Specimen data
Sampling event information
Sequences, images, etc.

https://www.gbif.org/the-gbif-network
Data richness levels supported by GBIF

1. Catalogue of collections
2. Species in countries and areas
3. Species with dates and coordinates
4. Species with dates, coordinates, methods, abundance and absence etc.
Data published through GBIF.org

Species occurrence records accessible through GBIF over time

- Kingdom
  - Unknown
  - Other
  - Plantae
  - Animalia

Number of occurrences (in millions)

Date

2008 - 2018

www.gbif.org/analytics/global
Species occurrence records: 1,338,052,443

Datasets: 45,921

Country Participants: 58
Organizational Participants: 38
Publishers: 1,445
GBIF data publishers: organizations

129 countries and territories with GBIF publishers

115 countries and territories publish data
Data citation: tracking and display

NMNH Extant Specimen Records

Leptodactylus mystaceus (Spix, 1824): Distribution extension for the Brazilian Cerrado (Anura: Leptodactylidae)

Andrews, T. Borges, R. Santos, L. (2017) Herpetology Notes. Fifty-seven species of anurans belonging to the genus Leptodactylus are registered and widely distributed throughout Brazil (Sil et al., 2014; SBH, 2016). Among these species, Leptodactylus mystaceus (Spix, 1824) spreads throughout the whole northern and some areas of northeastern and central...

Journal Article
Data used in study DOI: 10.15468/dsl.0.x

DO ENVIRONMENTAL FACTORS AFFECT THE TAXONOMIC RELIABILITY OF LEAF CUTICULAR MICROMORPHOLOGICAL CHARACTERS? A CASE STUDY IN PODOCARPACEAE

Chaplin, J. Jeffree, C. Arnedd, A. Mill, R. (2017) Edinburgh Journal of Botany. Leaf cuticular micromorphology has been cited as an important set of taxonomic characters in many studies, but previous studies have largely been based on small sample sizes. The premise of this study was to understand if external factors affect cuticular micromorphology of Podocarpaceae. Two exam..

Journal Article
Data used in study DOI: 10.15468/dsl.0.x

One for each ocean: revision of the Bursa granularis (Röding, 1798) species complex (Gastropoda: Tonnoidae: Bursidae)

Sanders, M. Marie, D. Bouchet, P. Caron, M. Beu, A. Samuel, S. (2017) Journal of Molluscan Studies. Bursa granularis (Röding, 1798) is a tomostad gastropod that is regarded as broadly distributed throughout the Indo-Pacific and tropical western Atlantic. Because of its variable shell it has received more than thirteen names, now all synonymized under the name B. granularis. We sequenced a fra...

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GBIF enabled science today: peer-reviewed publications

- Agriculture
- Aliens and invasives
- Biogeography
- Citizen science
- Climate change
- Conservation
- Data management
- Ecology
- Ecosystem services
- Evolution
- Human health
- Species distributions
- Phylogenetics
- Taxonomy

~ 2 papers a day
Benefits of openness

Increases the efficiency of research
Promotes scholarly rigor and quality of research
Enables tracking of data use and data citation through DOIs
Expands the spectrum of academic products through data papers
Enhances visibility and scope for engagement
Enables researchers to ask new research questions
Enhances collaboration and community-building
Increases the economic and social impact of research
International conventions and requirements from funding agencies
Research stations in GBIF: increase **visibility**, **collaboration**, and **impact** through **data**

Only <50 stations represented in GBIF worldwide

Masses of high-quality and long-term data

Opportunity to get discovered through data searches

Measure research value also through data products and data citation
**Description:** The mission of Archbold Biological Station is to build and share the scientific knowledge needed to protect the life, lands, and waters of the heart of Florida and beyond. Archbold is located in Venus, south-central Florida. Since inception in 1941, Archbold Biological Station has prioritized the development and curation of an on-site, multi-taxon, specimen-based, natural history collection. The collection of specimens is necessary for research at the Station and for outside investigators, emphasizing two essential activities – the identification of species and documentation of biodiversity. After decades of steady growth the Archbold collection includes more than 250,000 well-preserved, and well-labeled specimens of plants, birds, fish, herptiles, mammals and arthropods. The Archbold collection is probably unrivaled in scope and size among biological field station collections in North America, and is likely one of the largest on-site collections encompassing the taxonomic diversity of a single (3,577-ha) site in the U.S.A. Our diverse natural history reference collection is a key component of the Station’s infrastructure, serving a broad community of staff researchers, visiting investigators and students, and supplying collection material and information to outside investigators. Plant specimens have been used in studies of community ecology, such as the response of vegetation to fire. The vertebrate collection was designed for studies of variation, growth patterns, life histories, and population dynamics of local vertebrates. The arthropod collection contributes to numerous studies needing insect identification, as well as providing large numbers of specimens with ecological data.

**Endorsed by:** U.S. Geological Survey

**Administrative contact:** Stephanie Leon

**Technical contact:** Vivienne Sclater

**Country or area:** United States of America
INTERACT: how to be visible in GBIF and publish data?

1. Work with CAFF and get your data published through CAFF: professional help

   Kári Fannar Lárusson
   Point of contact Administrative point of contact kari@caff.is

OR

1. Register own GBIF account and go ahead: independent statistics and citations

   https://www.gbif.org/publishing-data
Thank you

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