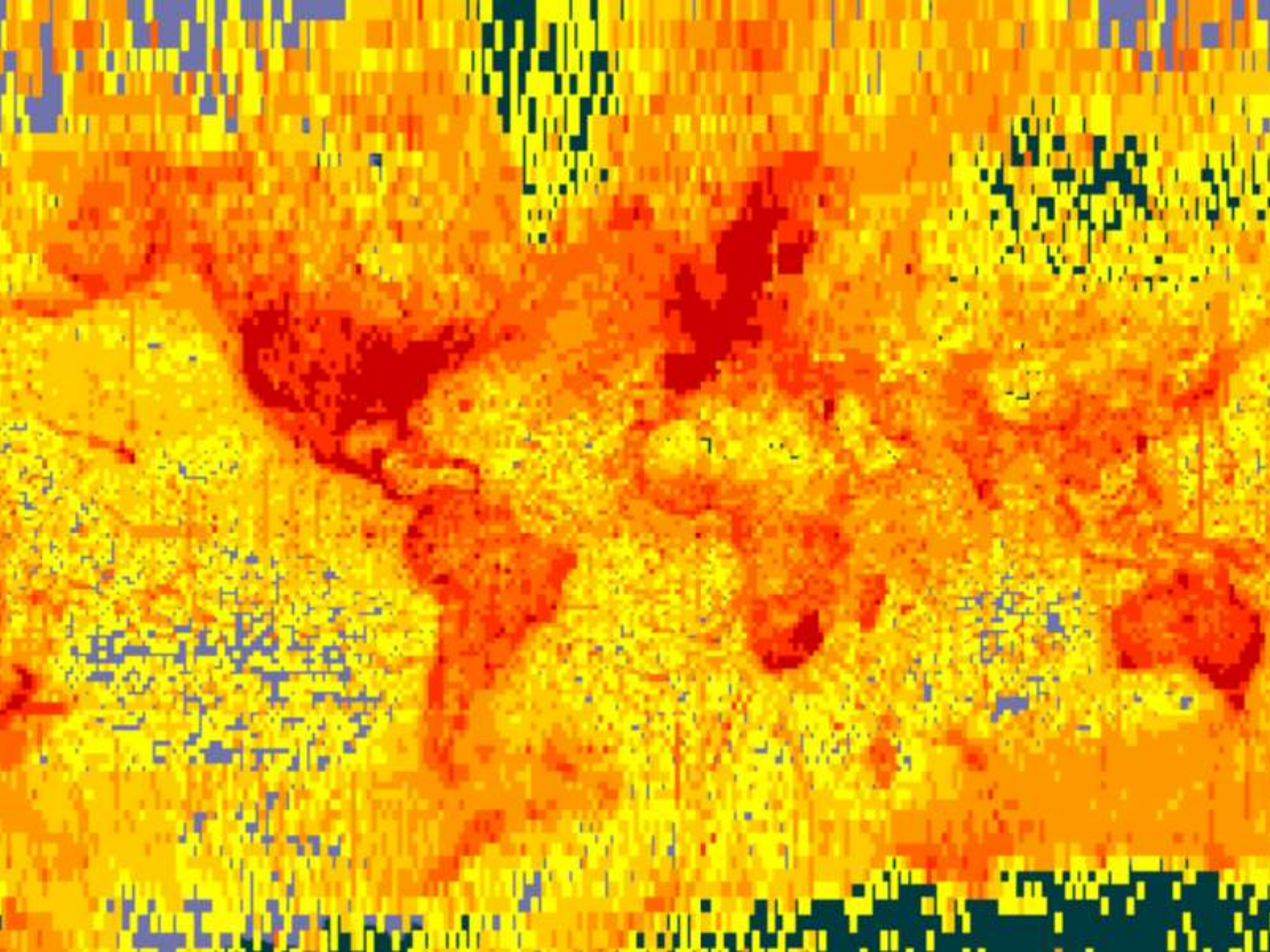




МИКОЛОГИЯ И ГЛОБАЛЬНЫЕ БАЗЫ ДАННЫХ ОТКРЫТОГО ДОСТУПА: ЕДИНОЕ ИНФОРМАЦИОННОЕ ПОЛЕ

Дмитрий Щигель
Global Biodiversity Information Facility

OUTLINE

Global biodiversity data

Data systems

What is GBIF?

What's inside – data classes

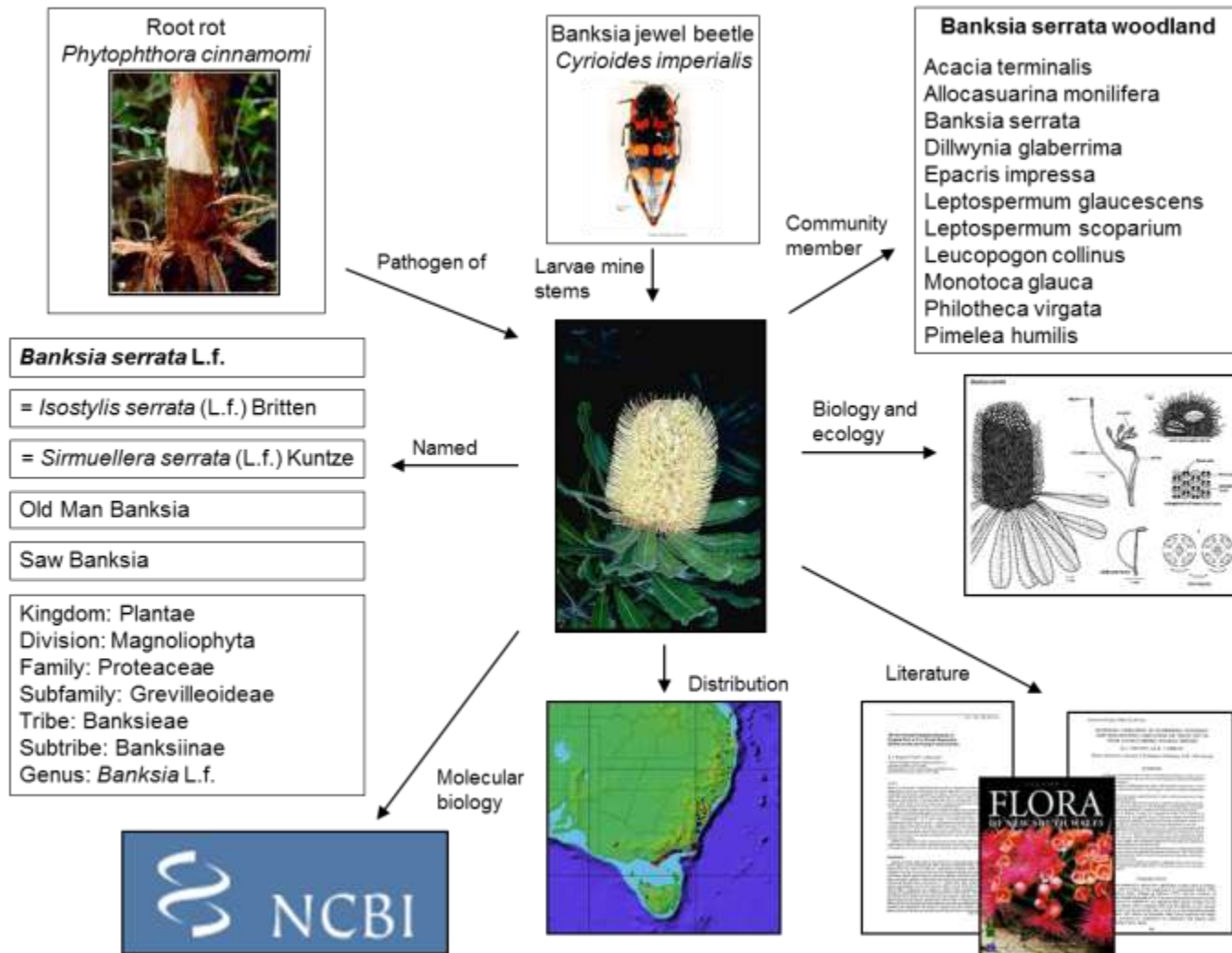
GBIF for science and policy

Global participation and stats

How does it work (for me)?

News and plans

BIODIVERSITY INFORMATION



SIGNIFICANT EXISTING INFRASTRUCTURE

GBIF



COL



BHL



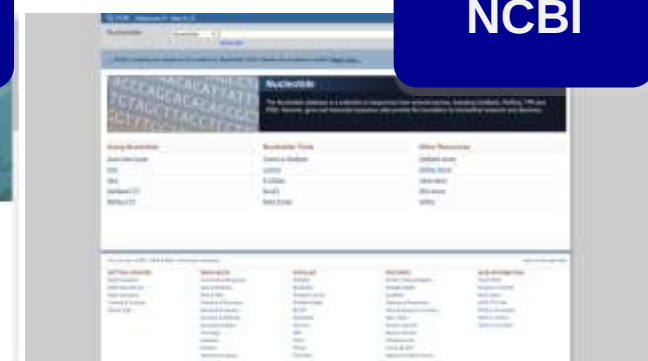
EOL



BOLD



NCBI



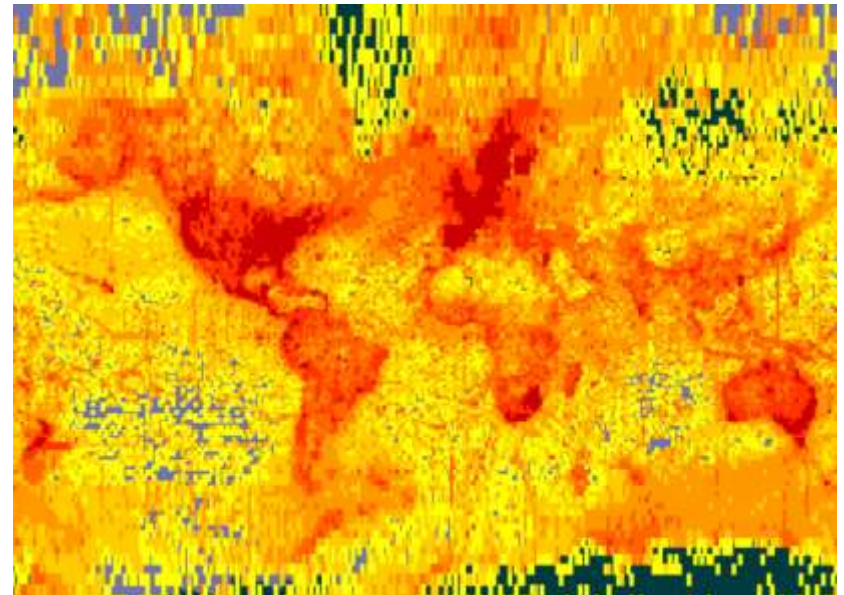
Informatics partnerships – Common standards – Stable infrastructure



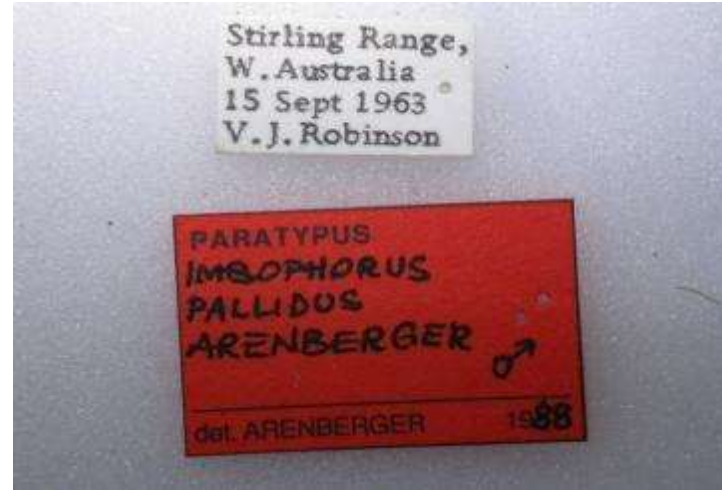
GLOBAL BIODIVERSITY INFORMATION FACILITY



- International open data infrastructure
- Funded by the governments of the participant countries
- Network for free and open access to biodiversity data
- 92 participants:
54 countries and 39 organisations



STANDARDISED BIODIVERSITY DATA



ScientificName:	<i>Imbophorus pallidus</i>
Family:	Pterophoridae
Locality:	Stirling Range
Country:	Australia
State:	WA
Latitude:	-34.3
Longitude:	118.0
CoordinatePrecision:	10000m
CoordinateMethod:	Google Earth
DateCollected:	1963-09-15
BasisOfRecord:	Preserved specimen
TypeStatus:	Paratype

What species?

Where was it found?

When was it found?

What is the evidence?

Specimen data

Sampling event information

Sequences, images, etc.

TYPES OF DATA SHARED THROUGH GBIF



Specimen



Material sample



Fossil



Literature occurrence



Observation
Human observation
Living specimen



Machine observation

New uses and
new data quality
dimensions

sample-based data

DATA RICHNESS LEVELS SUPPORTED BY GBIF

1.

Catalogue of collections

Collection Metadata

2.

Species in countries and areas

Species Checklists

3.

Species with dates and coordinates

Species Occurrences

4.

Species with dates, coordinates, methods, abundance and absence etc.

Sampled Organisms

DATA PUBLISHING: 1 - METADATA-ONLY

Metadata

FULL TITLE

Natural History Museum of Denmark Amphibia Collection

DESCRIPTION

Amphibian specimens collected in Denmark since 1814. All specimens are preserved at the Natural History Museum of Denmark in Copenhagen. These materials are open to visiting researchers but are not yet databased.

RESOURCE TYPE

Metadata

CONTACT

Email: snm@snm.ku.dk

GEOGRAPHIC SCOPE

Denmark (DK)

TAXONOMIC SCOPE

Class: Amphibia

Data

N/A

DATA PUBLISHING: 2 - CHECKLIST

Metadata

FULL TITLE

Checklist of the frogs of Denmark

DESCRIPTION

Species checklist of frog species recorded in Denmark to December 2015.

RESOURCE TYPE

Checklist

CONTACT

Email: frogs_dk@gmail.com

GEOGRAPHIC SCOPE

Denmark (DK)

TAXONOMIC SCOPE

Order: Anura



Checklist Data

Classification	Species	Status in DK
Ranidae	<i>Rana arvalis</i>	Native
Ranidae	<i>Rana dalmatina</i>	Native
Ranidae	<i>Rana temporaria</i>	Native
Ranidae	<i>Pelophylax ridibundus</i>	Native
Hylidae	<i>Hyla arborea</i>	Introduced
...	...	...

DATA PUBLISHING: 3 – OCCURRENCE DATA

Metadata

FULL TITLE

Natural History Museum of Denmark Amphibia Collection

DESCRIPTION

Amphibian specimens collected in Denmark since 1814. All specimens are preserved at the Natural History Museum of Denmark in Copenhagen. These materials are open to visiting researchers but are not yet databased.

RESOURCE TYPE

Occurrence

CONTACT

Email: snm@snm.ku.dk

GEOGRAPHIC SCOPE

Denmark (DK)

TAXONOMIC SCOPE

Class: Amphibia



Occurrence Data

Classification	Species	Locality	Coordinates	Date
Ranidae	Rana arvalis	Utterslev	55.717N 12.517E	10 July 1964
Ranidae	Rana arvalis	Bagsvaerd	55.767N 12.467E	17August 1964
Ranidae	Rana temporaria	Bagsvaerd	55.767N 12.467E	12 May 1972
Ranidae	Rana temporaria	Aarhus	56.150N 10.217E	17 May 1972
Ranidae	Rana arvalis	Utterslev	55.717N 12.517E	25 June 1972
Ranidae	Rana temporaria	Odense	55.400N 10.383E	5 May 1978
Ranidae	Rana arvalis	Utterslev	55.717N 12.517E	16 August 1979
Ranidae	Rana temporaria	Utterslev	55.717N 12.517E	16 August 1979

DATA PUBLISHING: 4 – SAMPLE EVENT DATA

Metadata

FULL TITLE

University of Copenhagen Frog Survey

DESCRIPTION

Counts of calling frogs along a 500m transect following protocol defined at <http://www.snm.ku.dk/FrogSurveyGuidelines.pdf>

RESOURCE TYPE

Sample event

CONTACT

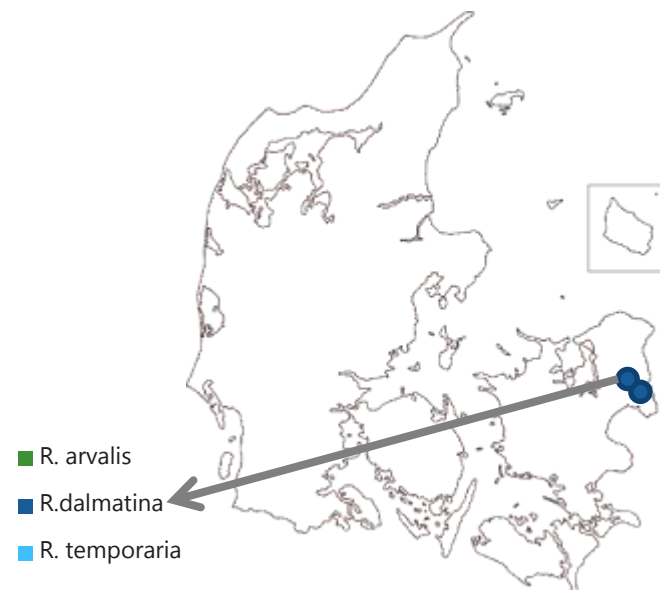
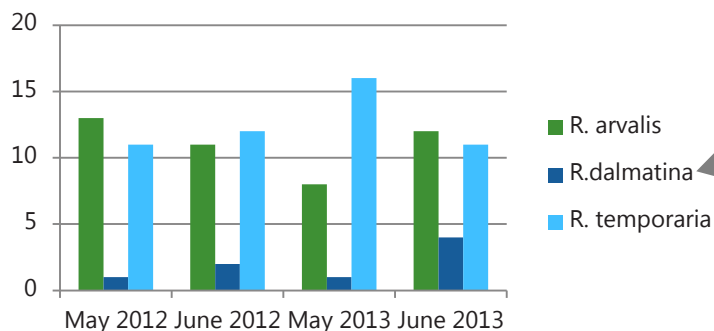
Email: snm@snm.ku.dk

GEOGRAPHIC SCOPE

Denmark (DK)

TAXONOMIC SCOPE

Class: Anura

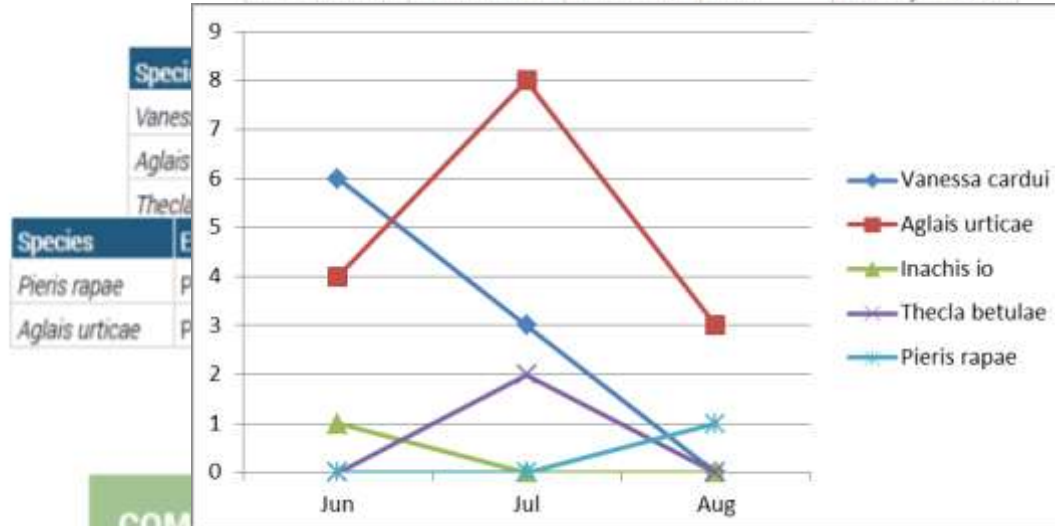


Sample Event Data

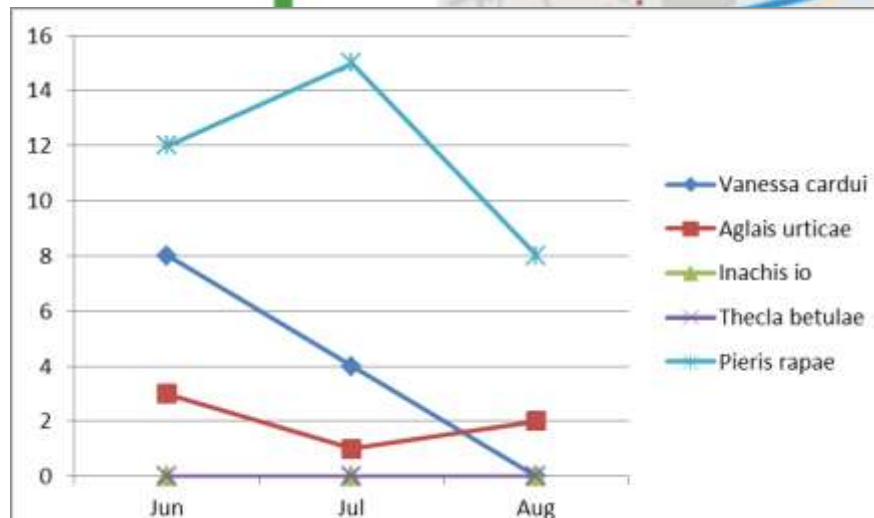
Classification	Species	Locality	Coordinates	Date	Sample Event	Protocol	Measure
Ranidae	Rana arvalis	Utterslev	55.717N 12.517E	10 May 2012	FCS-UTT-2012-1	Frog call survey	5 calling
Ranidae	Rana temporaria	Utterslev	55.717N 12.517E	10 May 2012	FCS-UTT-2012-1	Frog call survey	8 calling
Ranidae	Rana dalmatina	Bagsvaerd	55.767N 12.467E	12 May 2012	FCS-BAG-2012-1	Frog call survey	1 calling
Ranidae	Rana temporaria	Bagsvaerd	55.767N 12.467E	12 May 2012	FCS-BAG-2012-1	Frog call survey	11 calling
Ranidae	Rana arvalis	Bagsvaerd	55.767N 12.467E	12 May 2012	FCS-BAG-2012-1	Frog call survey	13 calling
Ranidae	Rana temporaria	Utterslev	55.717N 12.517E	20 June 2012	FCS-UTT-2012-1	Frog call survey	3 calling
Ranidae	Rana arvalis	Utterslev	55.717N 12.517E	20 June 2012	FCS-UTT-2012-1	Frog call survey	9 calling
Ranidae	Rana temporaria	Bagsvaerd	55.767N 12.467E	23 June 2012	FCS-BAG-2012-1	Frog call survey	12 calling

SAMPLING-EVENT DATA

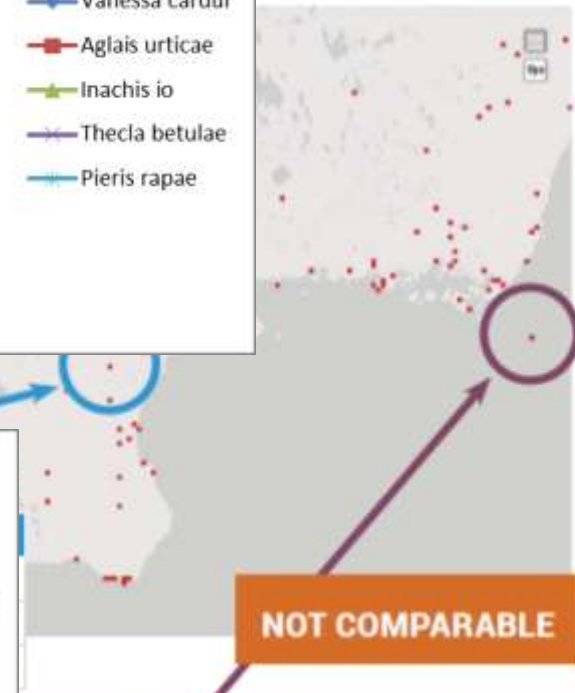
Species	Event	Quantity	Sample size	Protocol
<i>Vanessa cardui</i>	PlotA-2014-06	6 individuals	1 km	Butterfly transect



COM



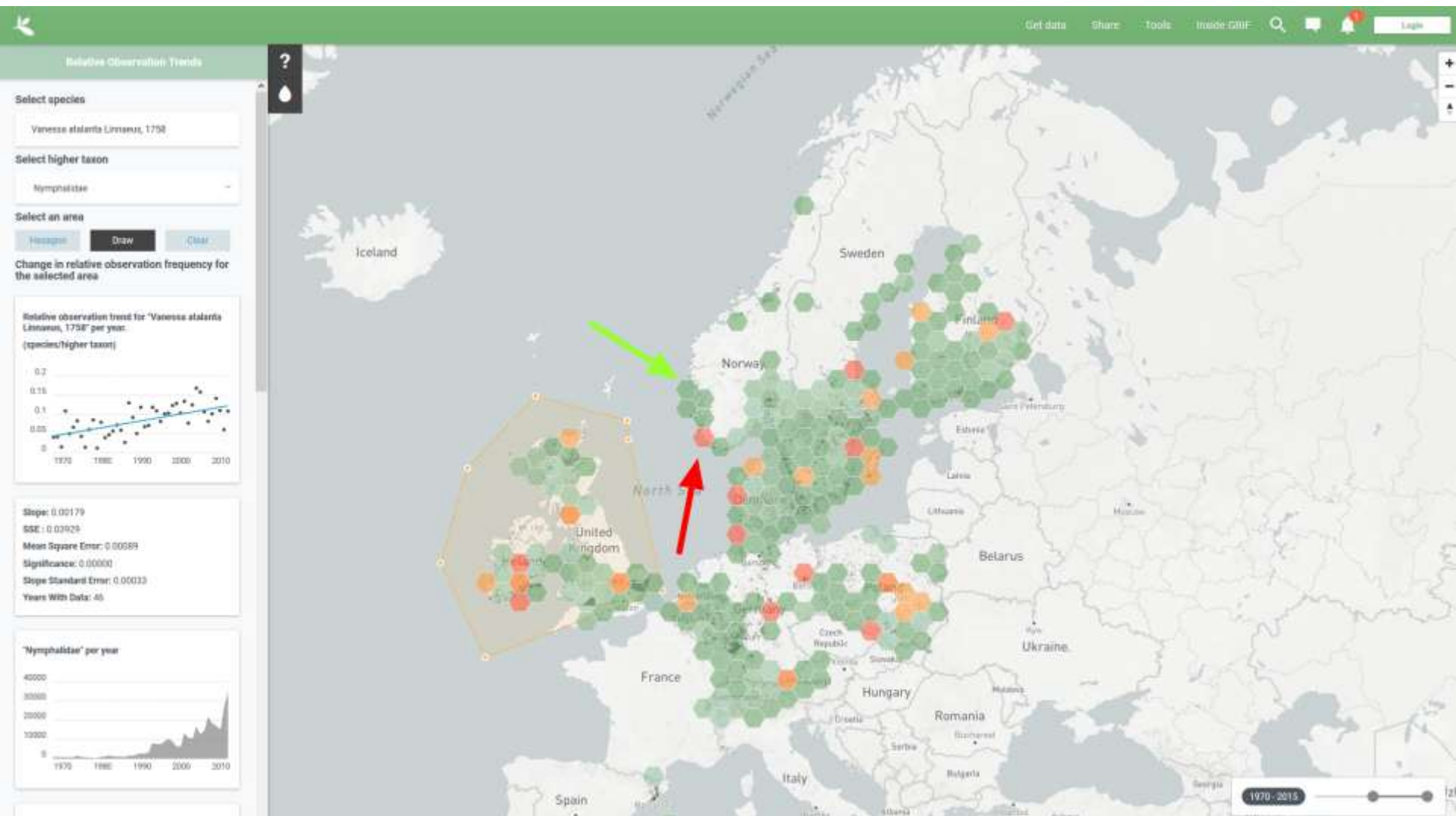
<i>Aglais urticae</i>	PlotB-2014-06	2 individuals	1 km	Butterfly transect
-----------------------	---------------	---------------	------	--------------------



NOT COMPARABLE

Species	Event	Quantity	Sample size	Protocol
<i>Chthys flesus</i>	DiveX-20120301	3 individuals	500 m ²	Fish dive survey
<i>Gadus sprattus</i>	DiveX-20120301	71 individuals	500 m ²	Fish dive survey

RELATIVE OBSERVATION TRENDS



demo.gbif.org -> tools -> relative observation trends



BY THE NUMBERS

30 July 2017

Species occurrence records

795,784,231

Datasets

35,449

*Country
Participants*

54

*Organizational
Participants*

39

Publishers

994

Records downloaded per month

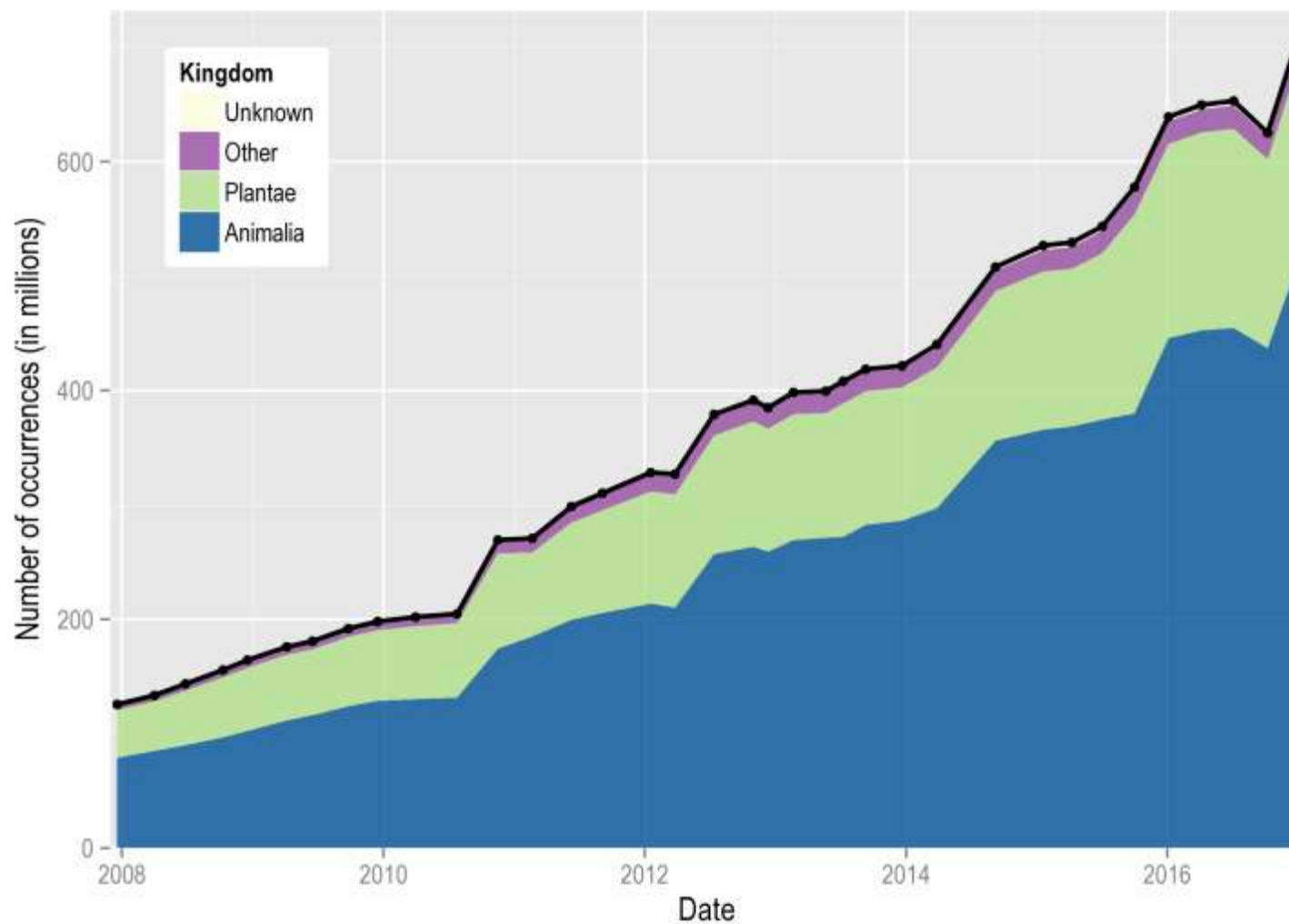
26.7 billion

Unique users per month (Feb 2017)

105,729

DATA PUBLISHED THROUGH GBIF.ORG

Species occurrence records accessible through GBIF over time



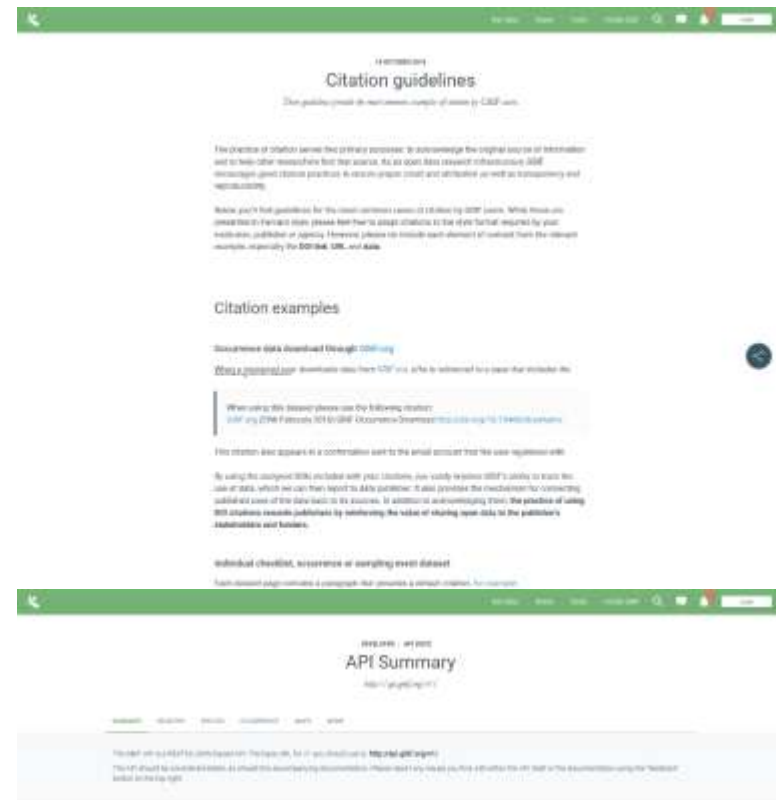
DATA ACCESS – FREE AND OPEN TO ALL

GBIF.org: search, browse a download

- Occurrences
- Species
- Datasets
- Publishers
- Countries

GBIF API – machine friendly e-access

- External systems
- Directly to R: rgbif & other libraries



Peer-reviewed publications using GBIF-mediated data

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GBIF Public Library
in this group: 167 members

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Overview Research results in this group

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Mendeley

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- Recently Read
- Favorites
- Needs Review
- My Publications
- Unsorted
- 2013 Science Symposium
- Belgium

Filter by My Tags

All

2001

2003

2004

2005

2006

2007

2008

2009

2010

2011

All Documents Edit Settings

Authors	Title	Year	Published In	Added
Odonne, Guillaume; Houël, Emeline; Bourdy...	Healing leishmaniasis in Amazonia: review of ethnomedicinal concepts and pharmaco-chemic...	2017	Journal of Ethnopharm...	Feb 10
Kiptoo CC, Gerber A & Van der Merwe A	Towards citizen-expert knowledge exchange for biodiversity informatics: A conceptual architecture	2016	The African Journal of In...	Feb 10
Miral, Mario; Sanmartín, Isabel; Felli...	Lineage-specific climatic niche drives the tempo of vicariance in the Rand Flora	2017	Journal of Biogeography	Feb 10
Galileo, Maria Helena M.; Santos-Silva, Antonio	New South American species of Lamiinae (Coleoptera, Cerambycidae)	2016	ZooKeys	Feb 10
Patel, Shveta; Singh, Garima; Singh, Rajendra	A checklist of global distribution of Liturgusidae and Thespididae (Mantodea: Dictyoptera)	2016	Journal of Entomology ...	Feb 10
Walther, Bruno A.; Pirsig, Lionel H.	Determining conservation priority areas for Palearctic passerine migrant birds in sub-Sahar...	2017	Avian Conservation...	Feb 10
Gutiérrez, Eliécer E.; Marinho-Filho, Jader	The mammalian faunas endemic to the Cerrado and the Caatinga	2017	ZooKeys	Feb 10
Potter, Kevin M.; Crane, Barbara S.; Hargrove, ...	A United States national prioritization framework for tree species vulnerability to climate change	2017	New Forests	Feb 10
Ouyang, Xiaoguang; Lee, Shing Yip; Connolly, Ro...	The role of root decomposition in global mangrove and saltmarsh carbon budgets	2017	Earth-Science Reviews	Feb 10
Santos, José; Meneses, Bruno M.	An integrated approach for the assessment of the Aedes aegypti and Aedes albopictus global spati...	2017	Acta Tropica	Feb 10
Vogel Ely, Cleusa; Bordignon, Sérgio Aug...	Implications of poor taxonomy in conservation	2017	Journal for Nature Cons...	Feb 10
Liston, Andrew D.; Goergen, Georg; Koch, ...	Revisions of the Afrotropical genera of Argidae and species of Pampsilota Konow, 1899 (Hymen...	2017	Deutsche Entomologis...	Feb 10
Subhankar Kumar Sarkar	Anomala Samouelle, 1819 (Rutelinae:	2017	World	Feb 10

Details Notes Contents

Type: Journal Article

Healing leishmaniasis in Amazonia: review of ethnomedicinal concepts and pharmaco-chemical analysis of traditional treatments to ...

Authors: G. Odonne, E. Houël, G. Bourdy et al.

View research catalog entry for this paper

Journal: *Journal of Ethnopharmacol...*

Year: 2017

Volume:

Issue:

Pages:

Abstract:

ETHNOPHARMACOLOGICAL RELEVANCE Cutaneous/mucocutaneous leishmaniasis are neglected tropical diseases occurring in all intertropical regions of the world. Amazonian populations developed an abundant knowledge related to the disease and its remedies.

GBIF ENABLED SCIENCE TOPICS

Agriculture

Biodiversity science

Biogeography

Citizen science

Climate change

Conservation

Data management

Data paper

Ecology

Ecosystem services

Evolution

Freshwater

Human health

Invasives

Marine

Phylogenetics

Species distributions

Taxonomy



GLOBAL RELEVANCE



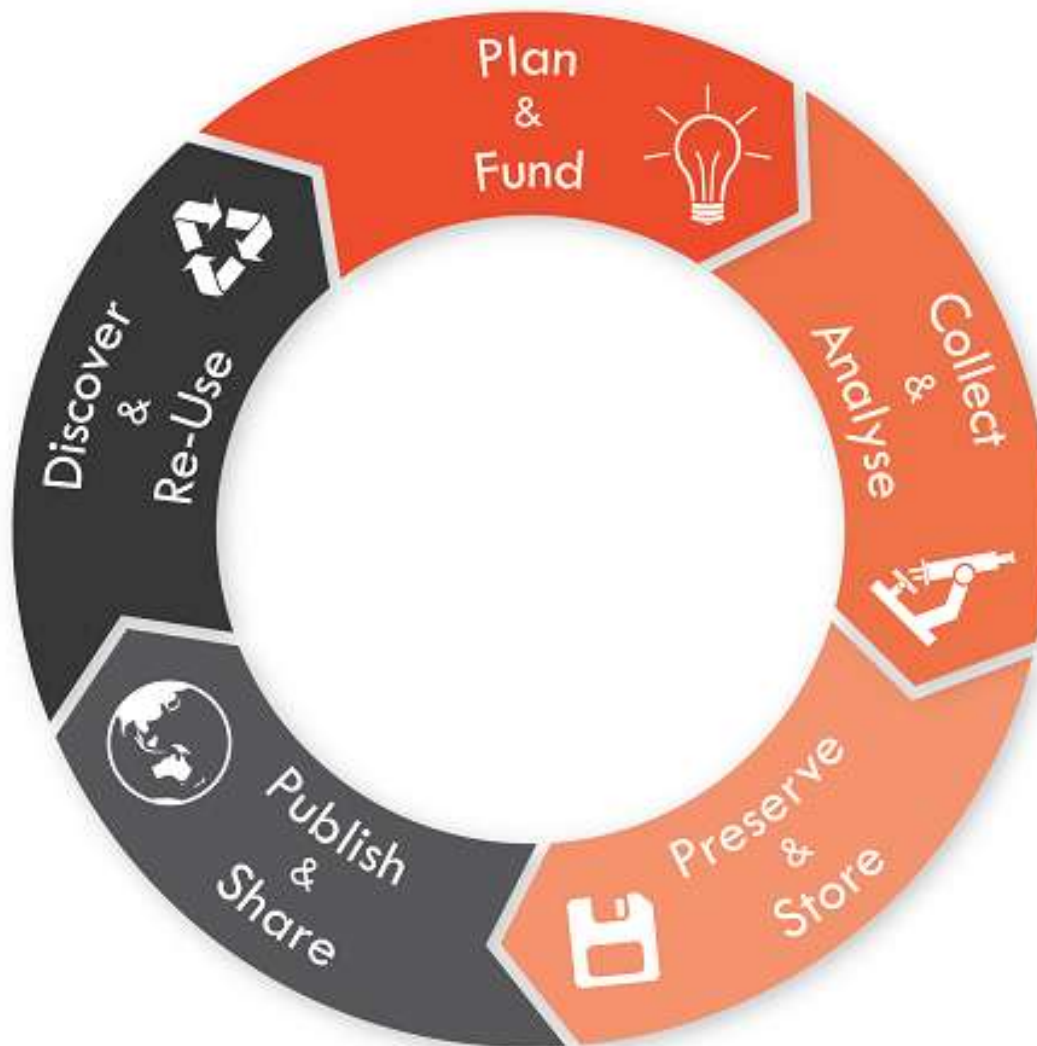
**Convention on
Biological Diversity**



United Nations
Framework Convention on
Climate Change



The research data lifecycle



SHORT TERM

LONG TERM

perspective



**RESEARCH
PHASE**

- file formats
- ownership
- metadata
- storage
- backups

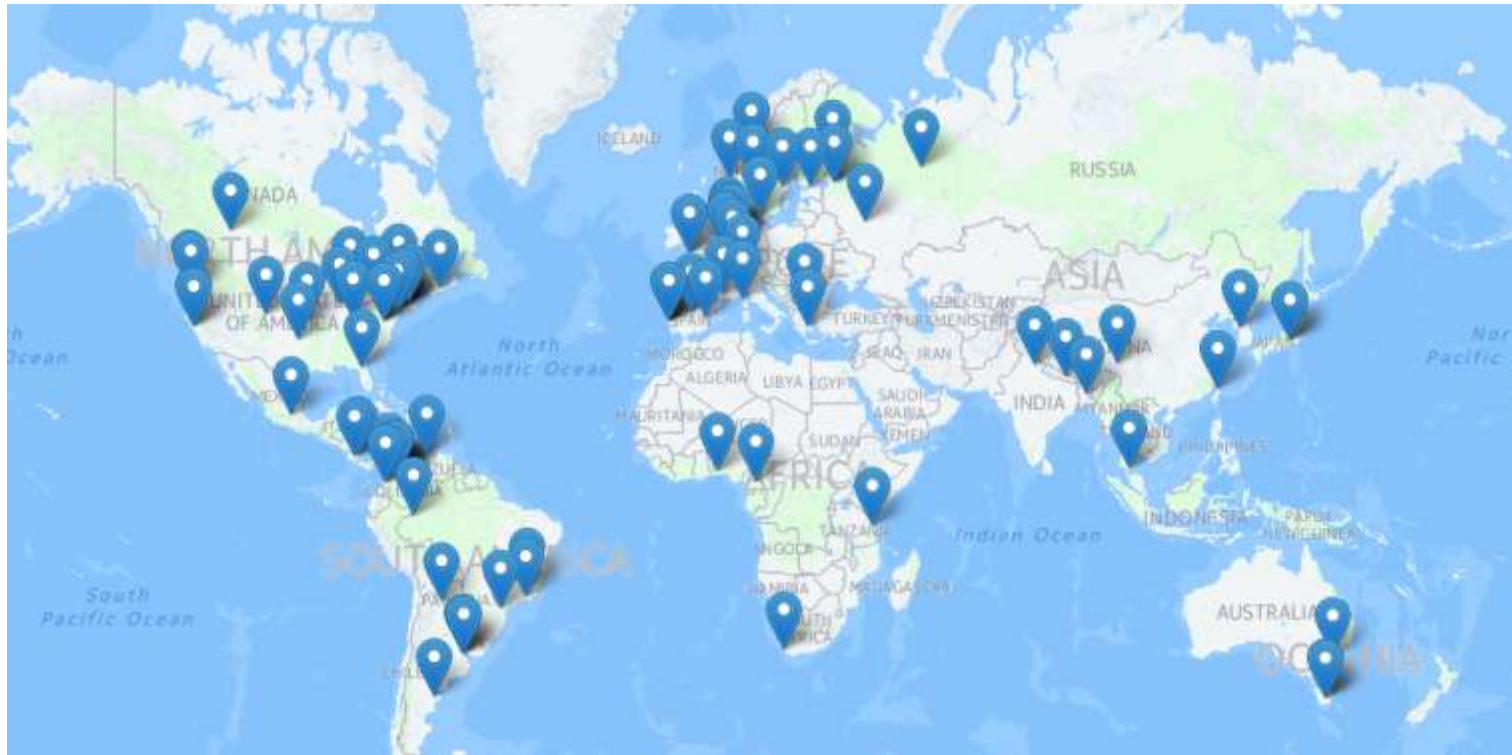
**DISSEMINATION
PHASE**

- share with whom?
- embargo?
- licensing
- metadata

**PRESERVATION
PHASE**

- repository?
- long-term manager?

IPT Stats: *Dec 2016*



174 installations

2,851 occurrence datasets

52 countries

55 sampling event datasets

211 checklists

100+ million records

How does it work (for me)?

Seven steps of publishing data through GBIF:



1. **Agree** with you administration
2. **Register** your institution / collection
3. **Understand** what data type you are dealing with (4 types)
4. **Standardize** / format your data (export)
5. **Choose** your way to publish
6. **Check** your data
7. **Publish!**

GBIF member nodes endorse institutions to share data

- Optionally enforcing data quality thresholds
- Judgment on a case by case basis

Institutions publish datasets on GBIF

- Retain ownership
- Referenced as the “publisher”

Institutions often offer assistance to others in separate agreements

- Hosting services

Chose your data license

- CC0 and CC BY - 90% datasets, 85% records
- CC BY-NC - 7% of datasets, 10% of records

Российский сайт Глобальной Информационной Системы по Биоразнообразию - GBIF

GBIF.ORG



GBIF

Global Biodiversity
Information Facility

Главная

GBIF Россия

Как опубликовать данные в GBIF
Спецификация Darwin Core
Публикации о GBIF на русском
языке
Данные о России в GBIF

Фотографии

Полевые исследования
Конференции

Darwin Core спецификация

Biodiversity
Information
Standards
T D W G

Новости

Семинар по использованию данных GBIF.org.

Презентация

Семинар состоялся в рамках конференции Биология - наука XXI века <http://www.biology21.ru>. Огромное спасибо руководителю секции "Экология" Ане Квиткиной за организацию!

UGRABIO планы развития

Немного о подготовке объединенной базы биологических коллекций UGRABIO в Ханты-Мансийске. Вчера у нас прошел второй семинар "Биологические коллекции Югры: сбор, фиксация, хранение, научный оборот" (первая встреча была в 2015 году и дальше будет проводится раз в два года). В семинаре участвовали сотрудники ООПТ, музеев и двух университетов округа (ЮГУ и СурГУ). В этом году были представлены доклады об истории, содержании и развитии восьми коллекций (примерно столько же в прошлом).

Программы и Тезисы первого семинара можно найти (<https://fungariumysu.org/2017/04/04/biological-collection-of-yugra-workshop/>).

В этом году мы обсуждали также вопрос создания информационной системы, которая могла бы разместить данные коллекций в регионе. Сейчас есть только одна такая система (Биологическая коллекция ЮГУ) на основе ПО Specify, установлена и работает в пробном режиме на сервере ЮГУ (<https://mukhrinostation.com/research/ysu-bc/>). Участники семинара решили, что нужно продолжать развивать эту систему, сделать в базе несколько разделов для других коллекций и в этом году настроить для каждой ее рабочую среду и импортировать обозримое число образцов коллекций в качестве пробной версии. Следующим важным шагом будет организация экспорта данных из этой системы в GBIF.

DATA PAPERS


[Get data](#)
[Share](#)
[Tools](#)
[Inside GB](#)

Journals that publish biodiversity-related data papers

Please notify us at communication@gbif.org with corrections or updates.

Journal	Publisher	Open Access	APC estimate	Impact factor
Arxius de Miscel·lània Zoològica	Nat Hist Museum of Barcelona	Yes	€0	-
Biodiversity Data Journal	Pensoft	Yes	€300	-
BioInvasions Records	REABIC Journals	Yes	€600	-
BioRisk	Pensoft	Yes	€300	-
Biota Colombiana	Humboldt Institute, Colombia	Yes	€0	-
BMC Ecology	Biomed Central	Yes	€1,745	2.724
BMC Plant Biology	Biomed Central	Yes	€1,745	3.631
Botanical Studies	SpringerOpen	Yes	€600	1.159
Check List	Biotaxa	Yes	€27	-
China Scientific Data	Chinese Academy of Sciences	Yes	€458	-
Data in Brief	Elsevier	Yes	€458	-
Data	MDPI Open Access Journals	Yes	€0	-

News and plans

Participation and data growth

Herbaria and databases join in – how about yours?

Growing community, local support and interactions

New member countries, conferences, helpdesk and meetings

Integrated Publishing Toolkit (IPT)

Regular trainings and meetings

Tools for sharing data

Validator, Repostory, Suggest a dataset

Promoting data use

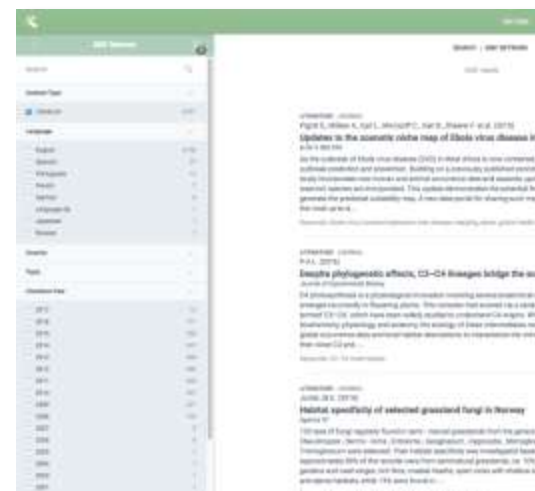
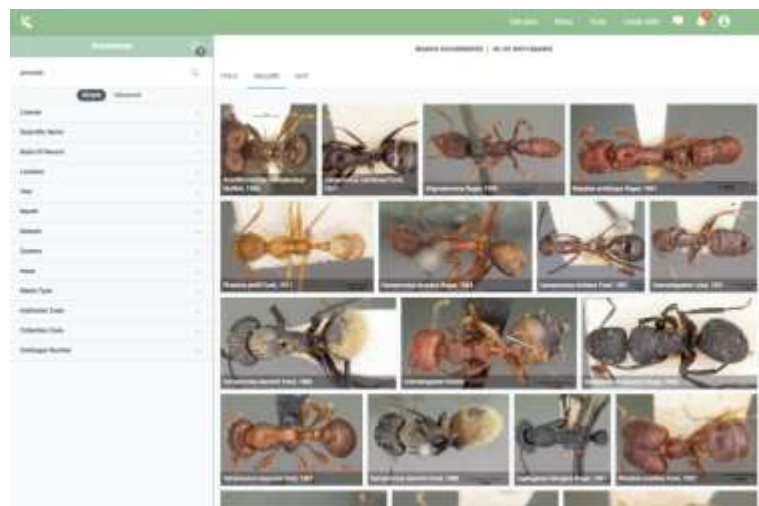
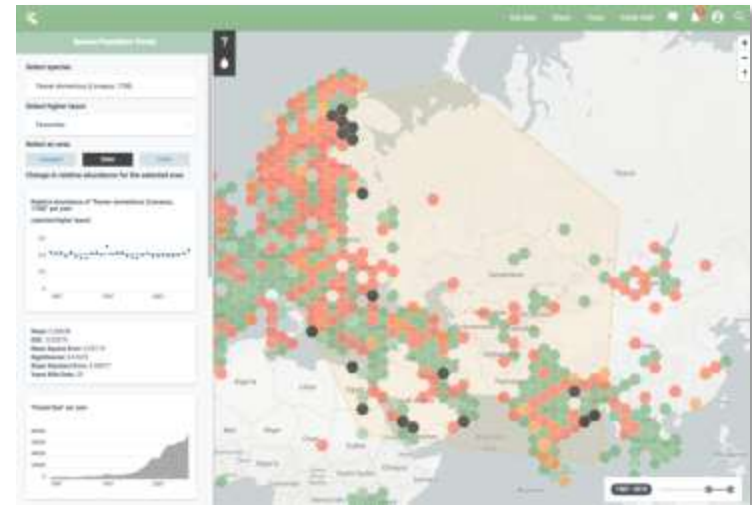
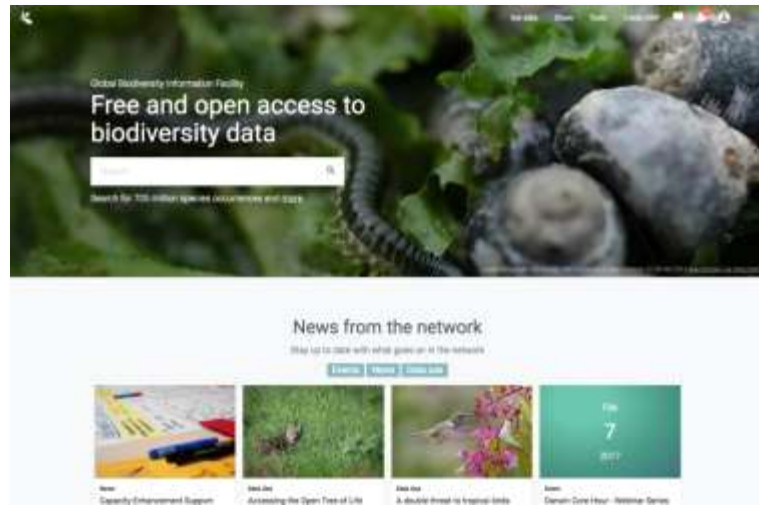
Financially supporting regions and data solutions

BID, BIFA, Ebbe Nielsen Challenge, Young Researcher Award, Capacity Enhancement

Improving functionality, new GBIF.org



<https://demo.gbif.org>



Summary

GBIF is a scientific infrastructure

Expose and promote your data

Visibility → Use → Relevance

Data transparency = trust in science

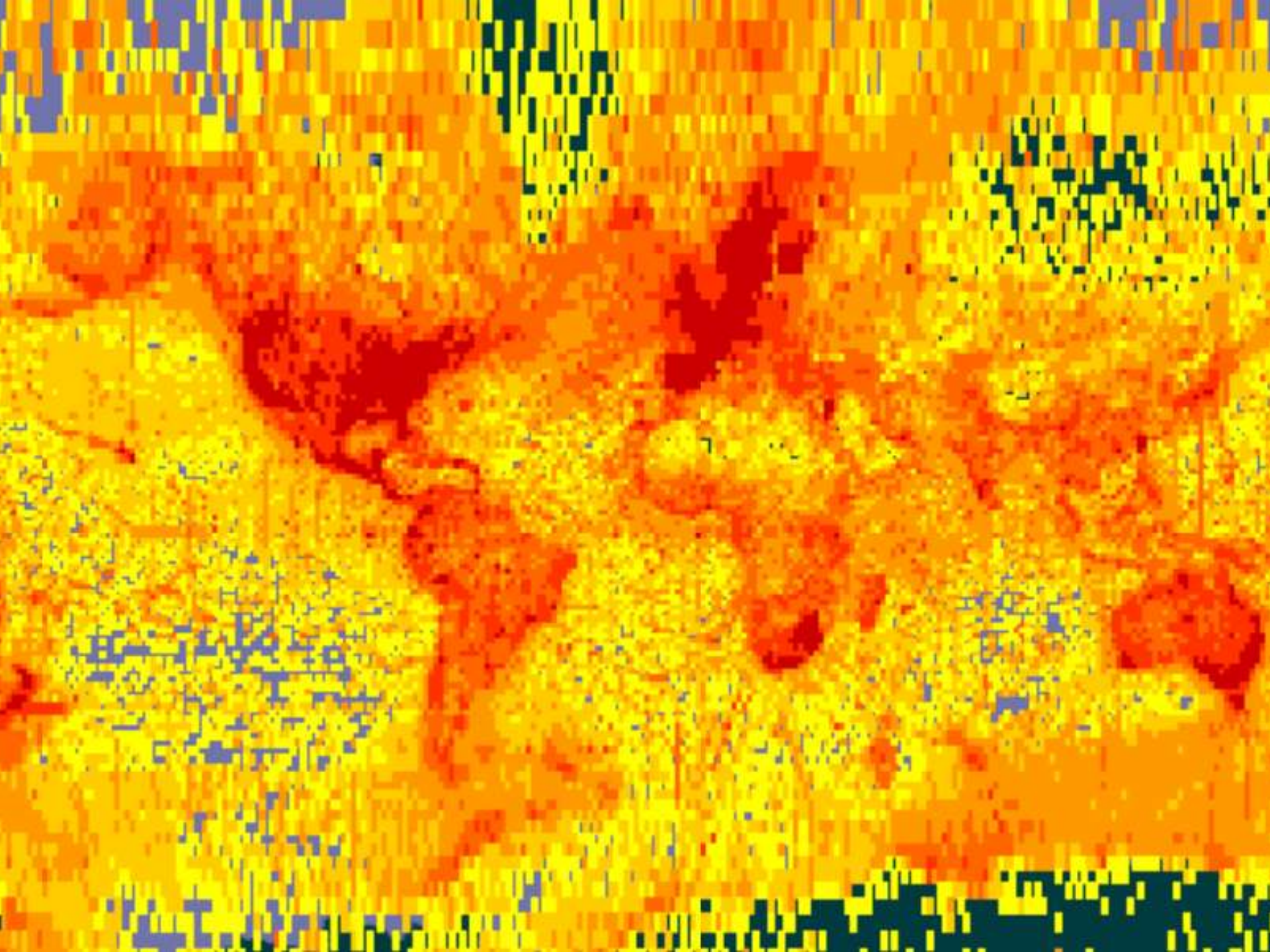
Digital availability, demand, data
citation and collaboration

Data as complementary scholarly
products

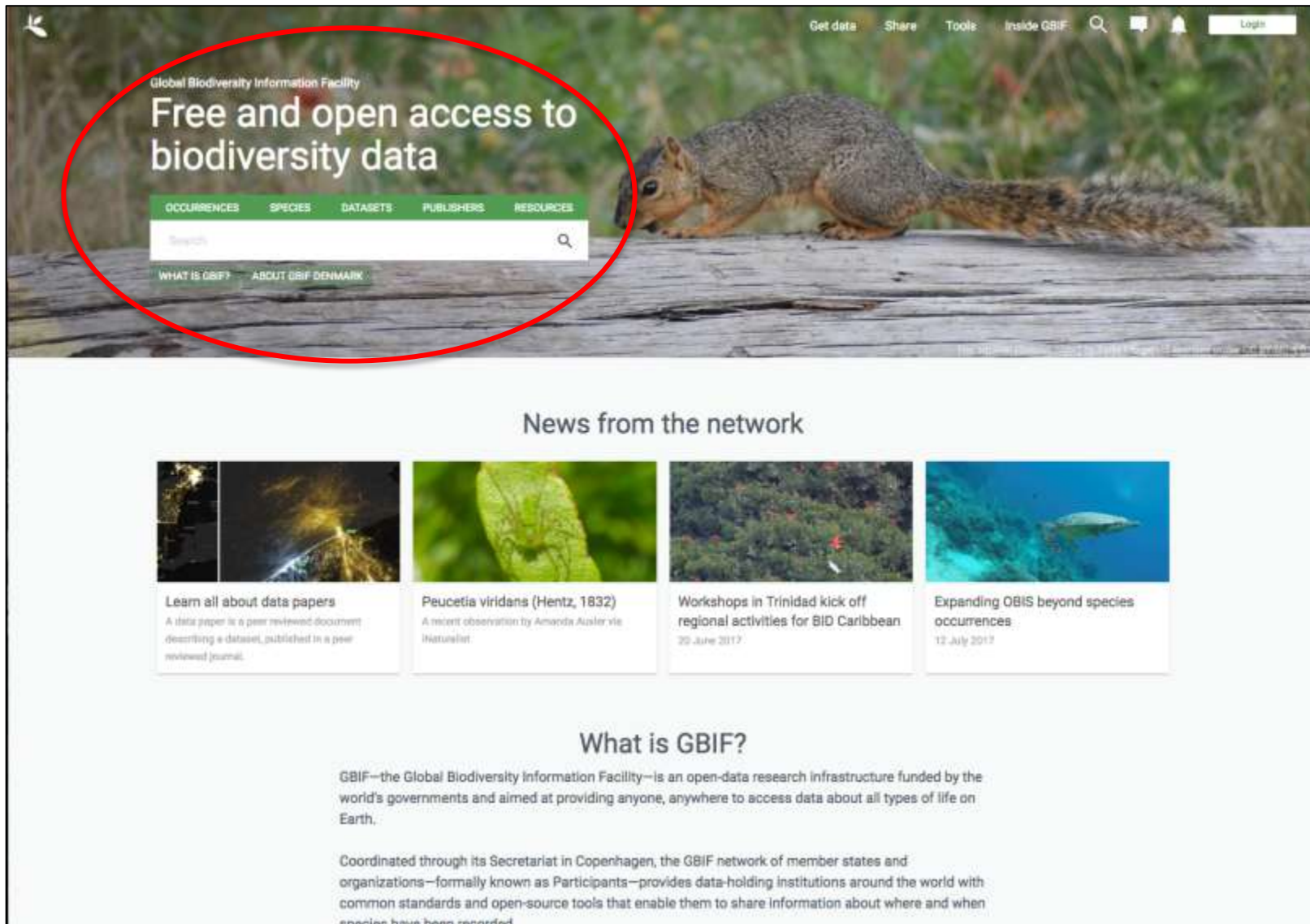
You control publishing, richness and
quality of data

Data citation and DOI reflect roles of
contributors

Options for sensitive data



THE NEW HOMEPAGE



The screenshot shows the GBIF homepage. A red circle highlights the header area, which includes the GBIF logo, the text "Global Biodiversity Information Facility", the main heading "Free and open access to biodiversity data", a navigation bar with links for OCCURRENCES, SPECIES, DATASETS, PUBLISHERS, and RESOURCES, a search bar, and links for "WHAT IS GBIF?" and "ABOUT GBIF DENMARK". The background of the header features a squirrel on a log. Below the header, the "News from the network" section displays four news items with images and text. The "What is GBIF?" section provides a definition of GBIF and its mission.

Global Biodiversity Information Facility

Free and open access to biodiversity data

OCCURRENCES SPECIES DATASETS PUBLISHERS RESOURCES

Search

WHAT IS GBIF? ABOUT GBIF DENMARK

News from the network



Learn all about data papers
A data paper is a peer-reviewed document describing a dataset, published in a peer-reviewed journal.



Peucetia viridans (Hentz, 1832)
A recent observation by Amanda Ausler via iNaturalist.



Workshops in Trinidad kick off regional activities for BID Caribbean
20 June 2017



Expanding GBIF beyond species occurrences
12 July 2017

What is GBIF?

GBIF—the Global Biodiversity Information Facility—is an open-data research infrastructure funded by the world's governments and aimed at providing anyone, anywhere to access data about all types of life on Earth.

Coordinated through its Secretariat in Copenhagen, the GBIF network of member states and organizations—formally known as Participants—provides data-holding institutions around the world with common standards and open-source tools that enable them to share information about where and when species have been recorded.

CROSS-SITE SEARCH



Get dataShareToolsInside GBIF

vanuatu

EVERYTHINGOCCURRENCESSPECIESDATASETPUBLISHERRESOURCES

Vanuatu

93,174 occurrences about 0 published occurrences



DATASETS14 RESULTS

Deep-water azooxanthellate Scleractinia from Vanuatu, and Wallis and Futuna Islands

Occurrence Dataset

A total of 134 recent species of azooxanthellate Scleractinia are reported from the Vanuatu (116 species) and Wallis and Futuna (83 species) Archipelagos, all but one being new records for the region.
Published by Southwestern Pacific Ocean Biogeographic Information System (DBIS) Node

1,056 occurrences



A new species of Monandrocampa (Asciadiaceae, Styelidae) from Vanuatu I. (South Pacific Ocean)

Checklist Dataset

This dataset contains the digitized treatments in Plazi based on the original journal article Monriot, Françoise (2009): A new species of Monandrocampa (Asciadiaceae, Styelidae) from Vanuatu I. (South P.
Published by Plazi.org taxonomic treatments database

Liagore pulchella, a new species of xanthid crab (Crustacea: Decapoda: Brachyura) from Vanuatu

Checklist Dataset

This dataset contains the digitized treatments in Plazi based on the original journal article Ng, Peter K. L., Naruse, Tohru (2007): Liagore pulchella, a new species of xanthid crab (Crustacea: Decapo.
Published by Plazi.org taxonomic treatments database

SPECIES1,126 RESULTS

Nihoa vanuatu Raven, 1994

species

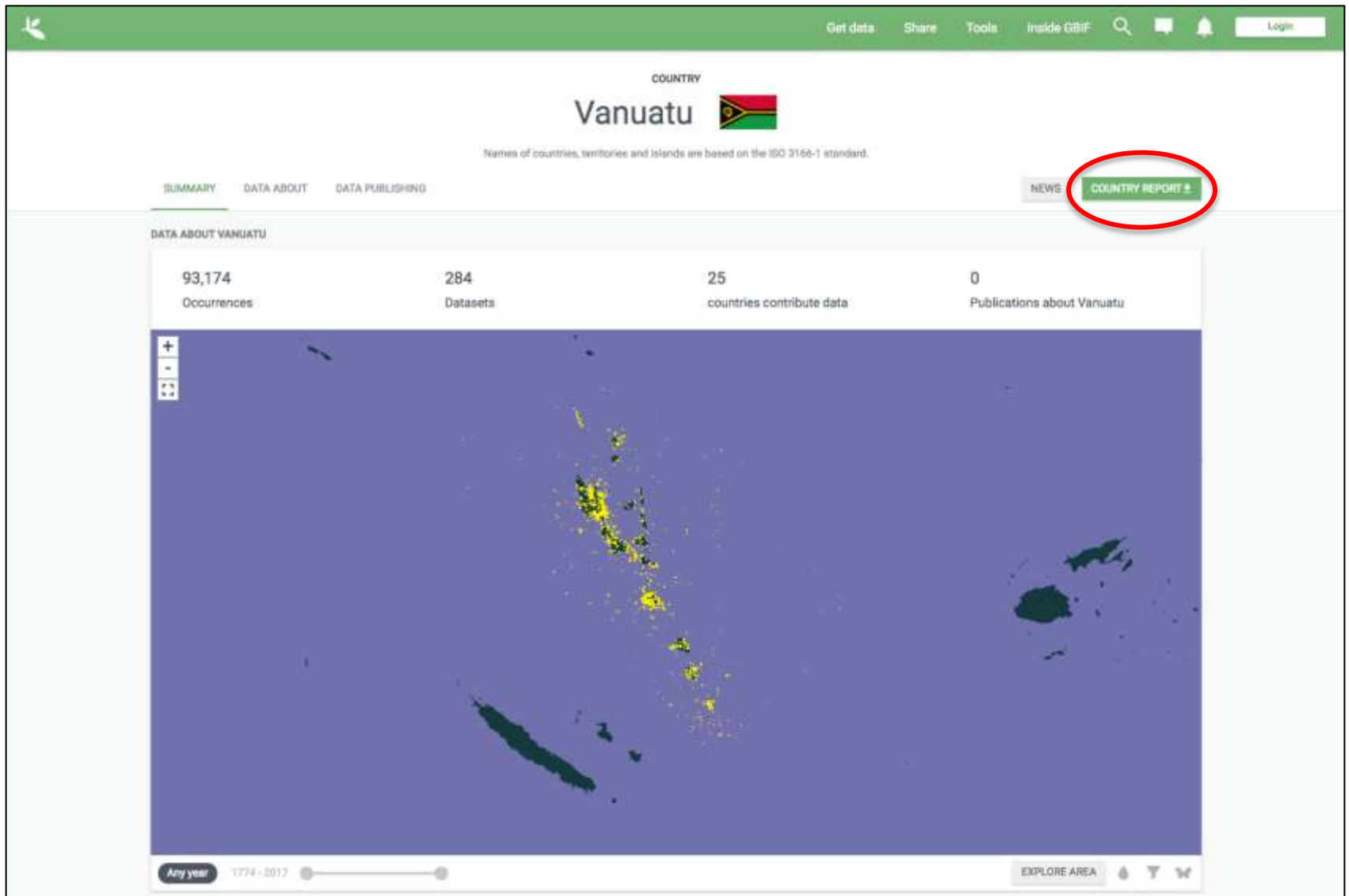
Taxonomy: Animalia > Arthropoda > Arachnida > Araneae > Barychelidae > Nihoa

accepted species 0 occurrences

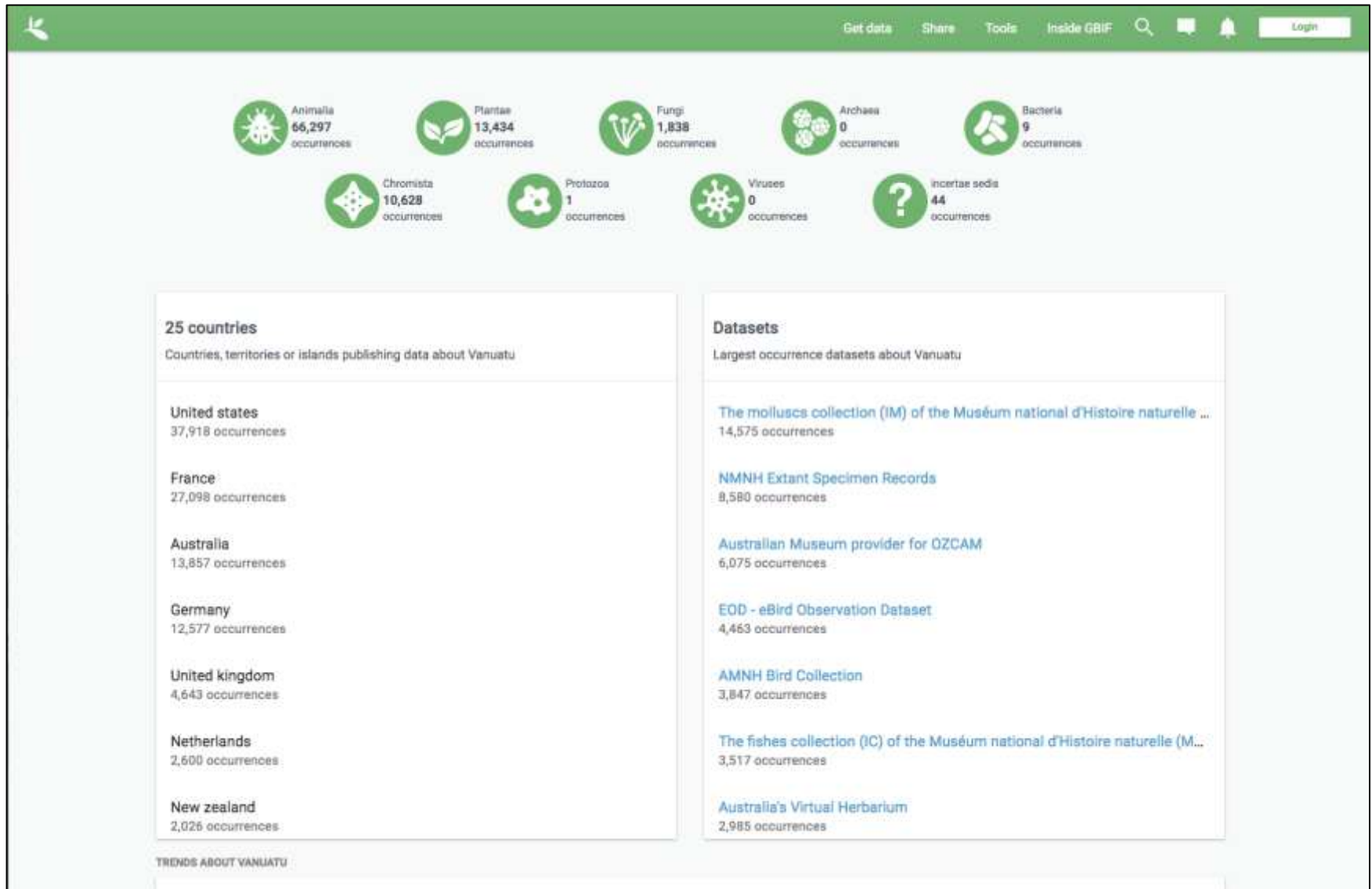
Flabellum vanuatu Wells, 1984

species

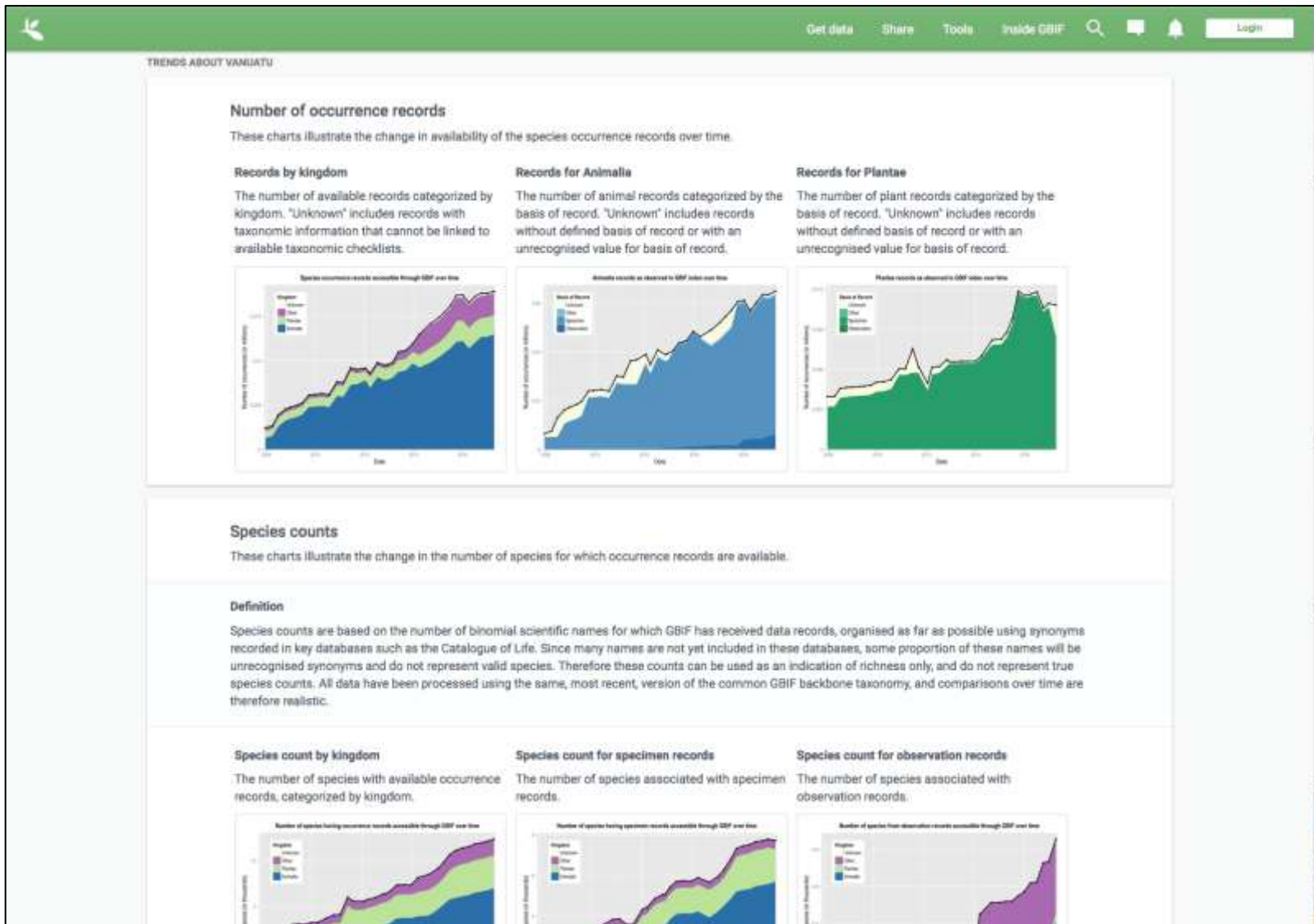
COUNTRY PAGE



COUNTRY PAGE



COUNTRY PAGE



OCCURRENCE SEARCH: IMAGES

The screenshot displays the GBIF Occurrence Search interface. On the left is a sidebar with search filters, including 'Search all fields', 'Simple' and 'Advanced' tabs, and various criteria like 'License', 'Scientific Name', 'Basis Of Record', 'Location', 'Year', 'Month', 'Dataset', 'Country', 'Vernacular', 'Issue', 'Media Type', 'Publisher', and 'Institution Code'. The 'Country' filter is set to 'Venezuela' with 93,174 results. The main area shows a grid of 20 images of various organisms, each with a caption. The 'GALLERY' tab is highlighted with a red circle. The top navigation bar includes links for 'Get data', 'Share', 'Tools', 'Inside GBIF', and a 'Login' button. The search bar at the top right shows 'SEARCH OCCURRENCES' and '8,910 WITH IMAGES'.

Search all fields

Simple Advanced

License

Scientific Name

Basis Of Record

Location

Year

Month

Dataset

Country

☒ Venezuela 93,174

search

☐ United States 137,129,114

☐ Sweden 84,166,242

☐ United Kingdom 63,213,066

☐ Australia 37,621,373

☐ France 35,555,238

☐ Canada 32,441,773

☐ Spain 34,925,346

☐ Norway 36,380,930

☐ Germany 33,788,233

☐ South Africa 33,728,187

CLEAR

Issue

Media Type

Publisher

Institution Code

SEARCH OCCURRENCES 8,910 WITH IMAGES

TAB GALLERY MAP SPECIES DATASETS DOWNLOAD

Tyto alba (Scopoli, 1799)

Chalcophaps longirostris Gould, 1848

Ipomoea indica (L. Burman) Merr.

Tremella fuciformis Berk., 1856

Bradybaena similaris (Rang, 1831)

Tremella hemata (Matsuy., 1826)

Lamprolaima boettgeri (Linnaeus, 1767)

Multididyma xanthocoma (Valenciennes, 1831)

Pteridea

Todaxiphys naga (Günther, 1860)

Trichoglossus haemorrhous (Linnaeus, 1771)

Hepidula abstrusa (Gard., 1842)

Panicum foetida L.

Coccoloba L.

Paspalum foetida L.

Cynaria rigida (Sw.) Benth.

Mimosa pudica L.

Diospyros samaranga A. Gray

Lomagramma polyphylla Black.

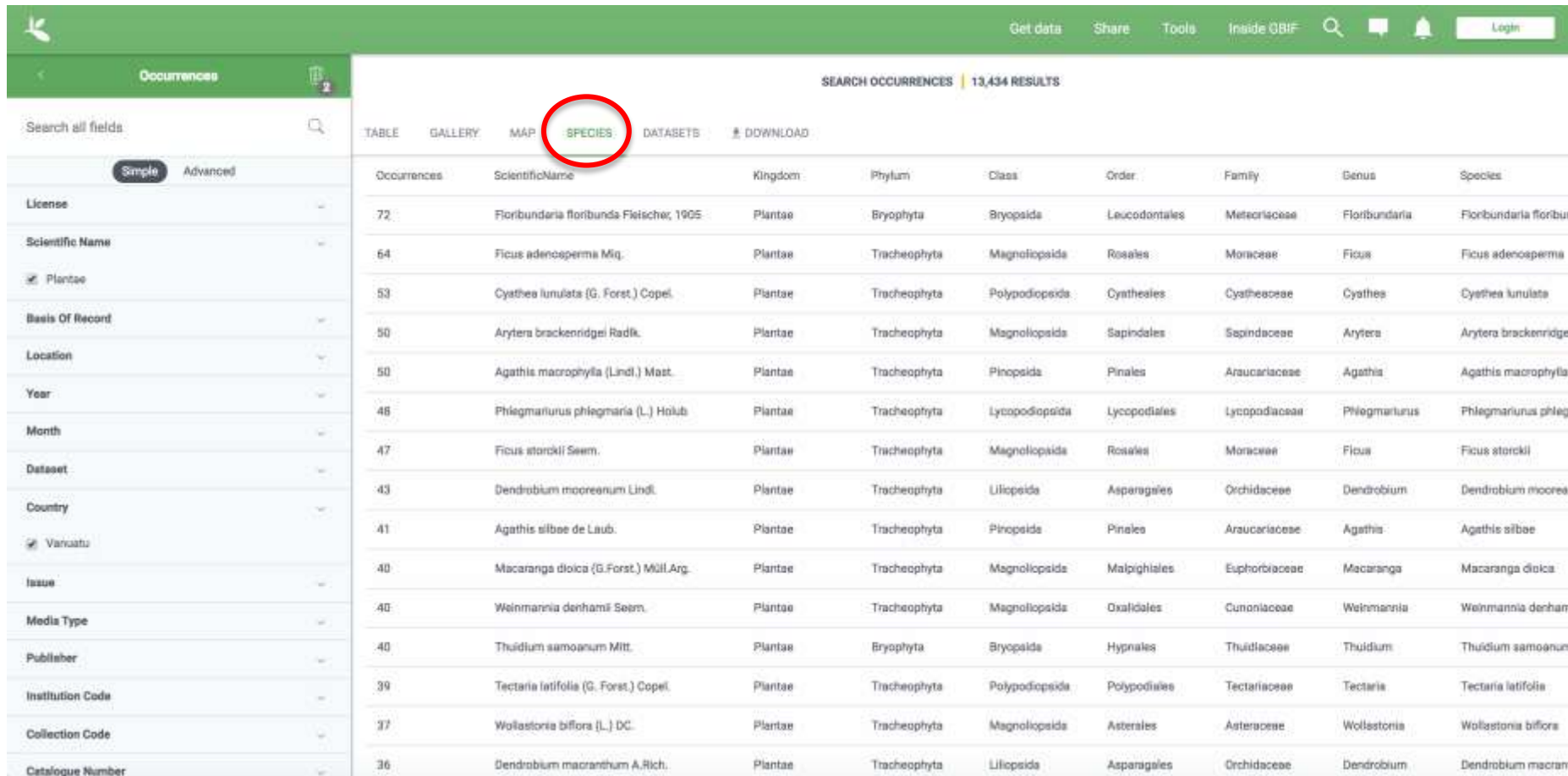
Macrothelyptis tonnelina (Gard.) Ching

Alchornea Sw.

OCCURRENCE SEARCH: MAP

The screenshot displays the GBIF Occurrence Search interface. The top navigation bar includes links for 'Get data', 'Share', 'Tools', 'Inside GBIF', and a 'Login' button. The main header shows 'SEARCH OCCURRENCES | 64,370 WITH COORDINATES'. Below this, a tabbed interface allows switching between 'TABLE', 'GALLERY', 'MAP' (highlighted with a red circle), 'SPECIES', 'DATASETS', and 'DOWNLOAD'. The left sidebar contains a search bar and various filters: License, Scientific Name, Basis Of Record, Location, Location (with a checked 'Including coordinates' checkbox), Year, Month, Dataset, Country, Variants (checked), Issue, Media Type, Publisher, Institution Code, Collection Code, Catalogue Number, and Type Status. The main map area shows a grid of hexagonal cells with red dots indicating occurrence locations in the Pacific region.

OCCURRENCE SEARCH: AD HOC SPECIES LIST



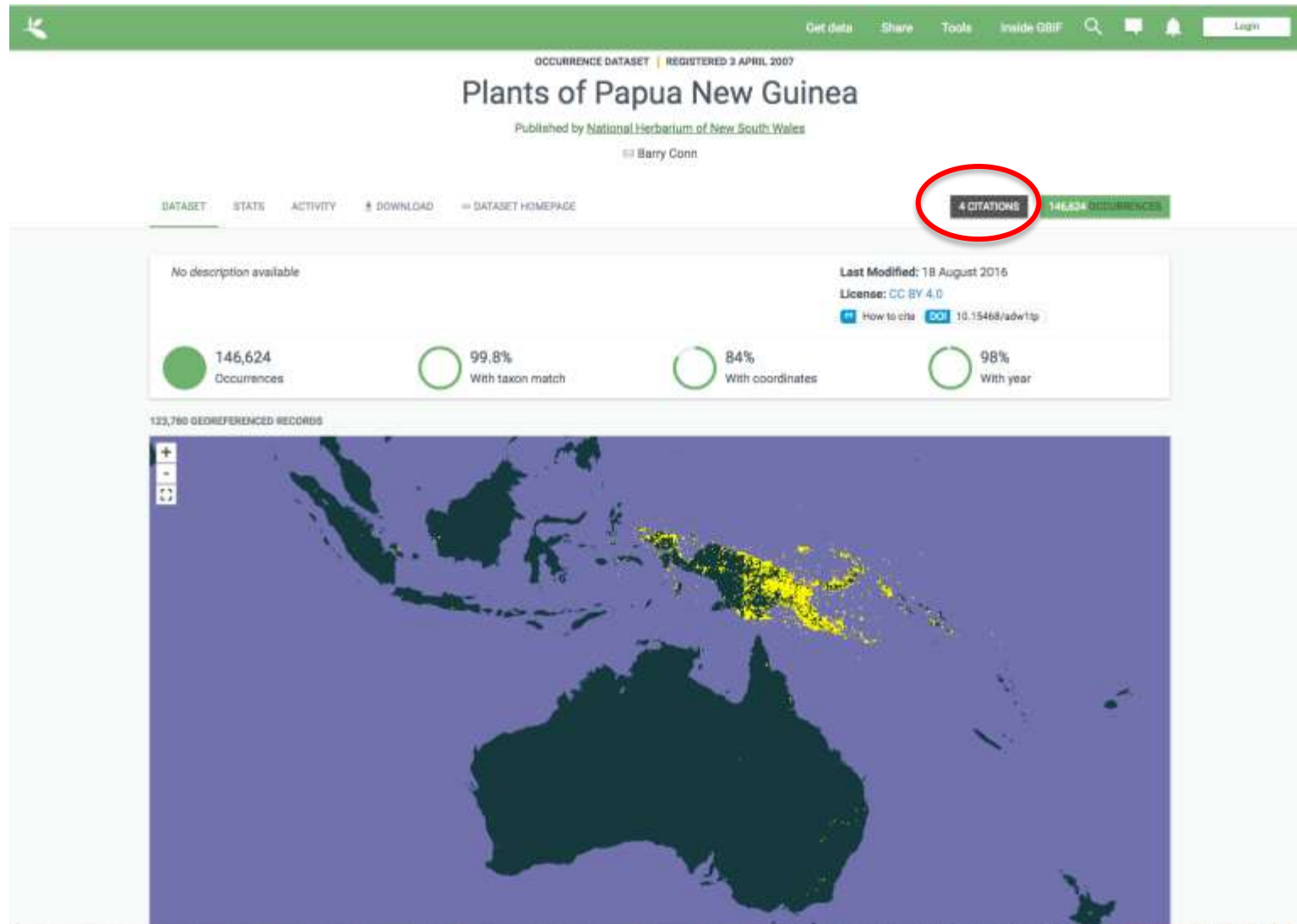
GBIF Occurrence Search interface showing an ad hoc species list. The 'SPECIES' tab is highlighted with a red circle. The table displays search results for occurrences, filtered by country (Vanuatu) and taxon key (6).

SEARCH OCCURRENCES | 13,434 RESULTS

TAB | GALLERY | MAP | **SPECIES** | DATASETS | DOWNLOAD

Occurrences	ScientificName	Kingdom	Phylum	Class	Order	Family	Genus	Species
72	Floribundaria floribunda Fleischer, 1905	Plantae	Bryophyta	Bryopsida	Leucodontales	Meteoriaceae	Floribundaria	Floribundaria floribunda
64	Ficus adenosperma Miq.	Plantae	Tracheophyta	Magnoliopsida	Rosales	Moraceae	Ficus	Ficus adenosperma
53	Cyathea lunulata (G. Forst.) Copel.	Plantae	Tracheophyta	Polypodiopsida	Cyatheaales	Cyatheaceae	Cyathea	Cyathea lunulata
50	Arytera brackenridgei Radlk.	Plantae	Tracheophyta	Magnoliopsida	Sapindales	Sapindaceae	Arytera	Arytera brackenridgei
50	Agathis macrophylla (Lindl.) Mast.	Plantae	Tracheophyta	Pinopsida	Pinales	Araucariaceae	Agathis	Agathis macrophylla
48	Phlegmarium phlegmaria (L.) Holub	Plantae	Tracheophyta	Lycopodiopsida	Lycopodiales	Lycopodiaceae	Phlegmarium	Phlegmarium phlegmaria
47	Ficus storckii Seem.	Plantae	Tracheophyta	Magnoliopsida	Rosales	Moraceae	Ficus	Ficus storckii
43	Dendrobium mooreanum Lindl.	Plantae	Tracheophyta	Liliopsida	Aspergales	Orchidaceae	Dendrobium	Dendrobium mooreanum
41	Agathis silbae de Laub.	Plantae	Tracheophyta	Pinopsida	Pinales	Araucariaceae	Agathis	Agathis silbae
40	Macaranga dioica (G. Forst.) Müll.Arg.	Plantae	Tracheophyta	Magnoliopsida	Malpighiales	Euphorbiaceae	Macaranga	Macaranga dioica
40	Weinmannia denhamii Seem.	Plantae	Tracheophyta	Magnoliopsida	Oxalidales	Cunoniaceae	Weinmannia	Weinmannia denhamii
40	Thuidium samoanum Mitt.	Plantae	Bryophyta	Bryopsida	Hypnales	Thuidiaceae	Thuidium	Thuidium samoanum
39	Tectaria latifolia (G. Forst.) Copel.	Plantae	Tracheophyta	Polypodiopsida	Polypodiales	Tectariaceae	Tectaria	Tectaria latifolia
37	Wollastonia biflora (L.) DC.	Plantae	Tracheophyta	Magnoliopsida	Asterales	Asteraceae	Wollastonia	Wollastonia biflora
36	Dendrobium macranthum A.Rich.	Plantae	Tracheophyta	Liliopsida	Aspergales	Orchidaceae	Dendrobium	Dendrobium macranthum

DATASET PAGE: CITATIONS



DATASET PAGE: CITATIONS

Resources

Search for resources

Countries Of Coverage

Countries Of Researcher

Literature Type

Year

Dataset

☒ Plants of Papua New Guinea

Publisher

Search for news, events, documents and much more. If you are looking for species occurrences then try our [occurrence search](#) instead.

Cannot find what you are looking for? You are always welcome to [contact helpdesk](#)

SEARCH RESOURCES | 4 RESULTS

LITERATURE

We do our best to find literature citing GBIF downloads. When a paper cites using a DOI we can track it to the individual datasets and publishers. This list only shows usage known to GBIF. The data might have been filtered further after download.

Habitat diversity predicts orchid diversity in the tropical south-west Pacific Literature

Knapp, G., Gillespie, T., Ormerod, P., Frickel, G. (2016) *Journal of Biogeography*

Aim To determine if habitat diversity, as estimated by climatic and topographic variables, can predict patterns of orchid diversity on different islands and archipelagos with similar explanatory power to biogeographical variables, such as area, isolation and age of an island. Location Sixty-three is...

Orchidaceae • biodiversity • climate • endemism • environmental heterogeneity • habitat diversity

Journal Article

Used in study [DOI 10.15468/dl.017hj3](#) [DOI 10.15468/dl.211osg](#) [DOI 10.15468/dl.erjxj](#) [DOI 10.15468/dl.e7xpp](#) [DOI 10.15468/dl.k2fgk](#) [DOI 10.15468/dl.s8mr5](#) [DOI 10.15468/dl.ufekom](#) [DOI 10.15468/dl.wnc0y](#) [DOI 10.15468/dl.zcb9rz](#)

Symbiosis limits establishment of legumes outside their native range at a global scale Literature

Simonsen, A., Dinnage, R., Barrett, L., Probec, S., Thrall, P. (2017) *Nature Communications*

Microbial symbiosis is integral to plant growth and reproduction, but its contribution to global patterns of plant distribution is unknown. Legumes (Fabaceae) are a diverse and widely distributed plant family largely dependent on symbiosis with nitrogen-fixing rhizobia, which are acquired from soil...

Biogeography • invasive species • Plant ecology • Rhizobial symbiosis

Journal Article

Data used in study [DOI 10.15468/dl.7pcm2k](#)

Toward a Self-Updating Platform for Estimating Rates of Speciation and Migration, Ages, and Relationships of Taxa Literature

Antonelli, A., Hettling, H., Condamine, F., Vos, K., Nilsson, R., Sanderson, M. ... (2016) *Systematic Biology*

Rapidly growing biological data—including molecular sequences and fossils—hold an unprecedented potential to reveal how evolutionary processes generate and maintain biodiversity. However, researchers often have to develop their own idiosyncratic workflows to integrate and analyse these data for re...

Bayesian phylogenetics • GenBank • data mining • divide-and-conquer methods • multilocus multispecies coalescent • next-generation sequencing

Journal Article

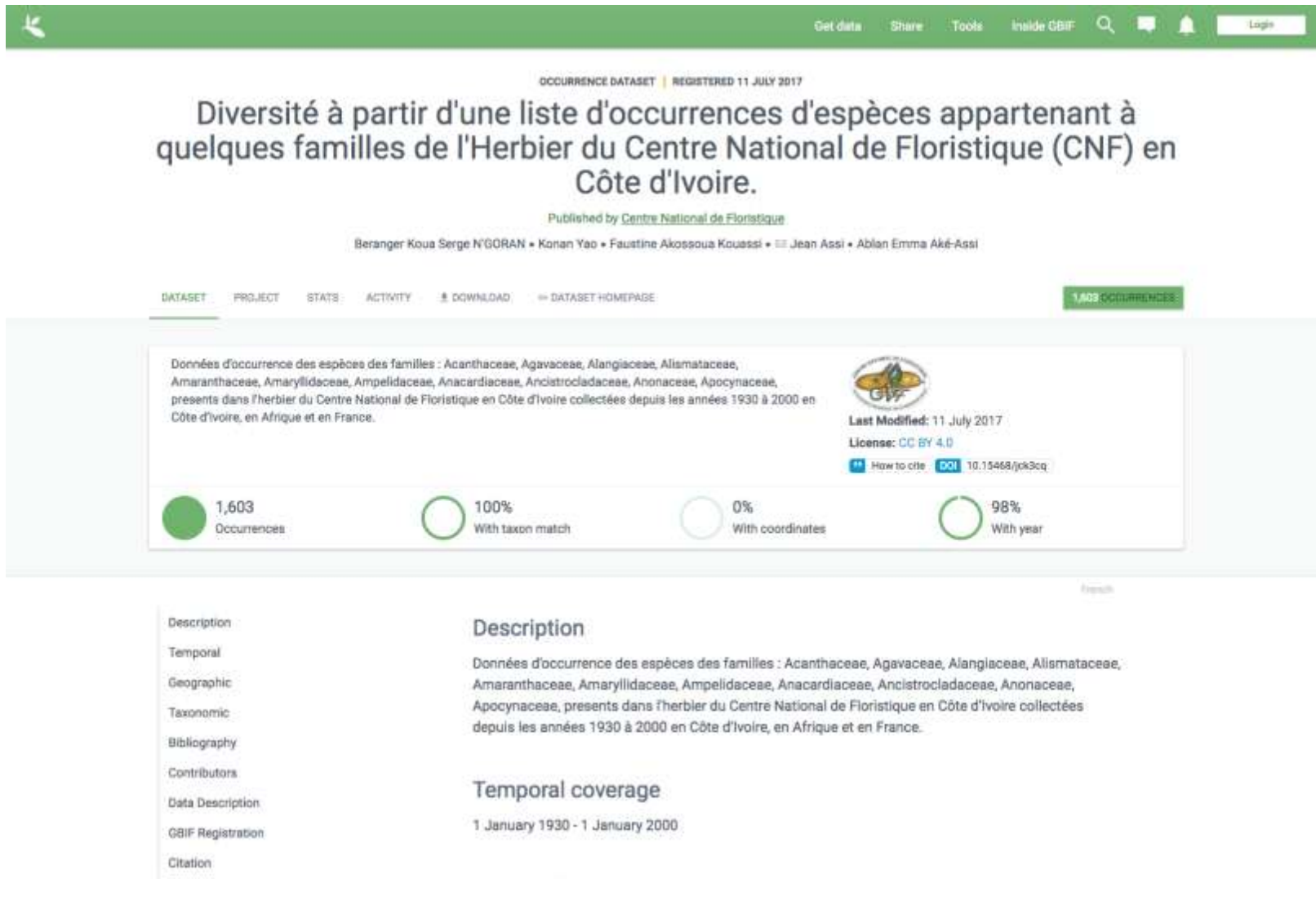
Data used in study [DOI 10.15468/dl.2083hb](#)

Self-compatibility is over-represented on islands Literature

Grossenbacher, D., Brandvain, Y., Auld, J., Burd, M., Cheptou, P., Corner, J. ... (2017) *New Phytologist*

Because establishing a new population often depends critically on finding mates, individuals capable of uniparental reproduction may have a colonization advantage. Accordingly, there should be an over-representation of colonizing

DATASET PAGE: DASHBOARD



DATASET PAGE: PROJECT IDENTIFIER

The screenshot shows the GBIF dataset page for a specific project. The page has a green header with navigation links: 'Get data', 'Share', 'Tools', 'Inside GBIF', a search icon, a chat icon, a notification icon, and a 'Login' button. Below the header, the text 'OCCURRENCE DATASET | REGISTERED 11 JULY 2017' is displayed. The main title is 'Diversité à partir d'une liste d'occurrences d'espèces appartenant à quelques familles de l'Herbier du Centre National de Floristique (CNF) en Côte d'Ivoire.' followed by 'Published by Centre National de Floristique'. Below this, the authors are listed: 'Beranger Koua Serge N'GORAN • Konan Yao • Faustine Akossoua Kouassi • Jean Assi • Ablan Emma Aké-Assi'. A navigation bar contains links: 'DATASET', 'PROJECT' (circled in red), 'STATS', 'ACTIVITY', 'DOWNLOAD', and 'DATASET HOMEPAGE'. On the right of this bar, a green button indicates '1,603 OCCURRENCES'. The main content area features the project title 'Evaluation and development of a funding mechanism and efficient management of data on plant biodiversity in Côte d'Ivoire (Ivory Coast)' and the project ID 'Project id: BID-AF2015-0025-NAC' (circled in red). Below the title, the 'Funding' section shows 'Funding € 59,131 Co Funding € 124,130 Type Of Grant National grant Financed by the BID Programme'. At the bottom, there is a link for 'Project contacts'.

OCCURRENCE DATASET | REGISTERED 11 JULY 2017

Diversité à partir d'une liste d'occurrences d'espèces appartenant à quelques familles de l'Herbier du Centre National de Floristique (CNF) en Côte d'Ivoire.

Published by Centre National de Floristique

Beranger Koua Serge N'GORAN • Konan Yao • Faustine Akossoua Kouassi • Jean Assi • Ablan Emma Aké-Assi

DATASET **PROJECT** STATS ACTIVITY DOWNLOAD DATASET HOMEPAGE

1,603 OCCURRENCES

Project id: BID-AF2015-0025-NAC

Evaluation and development of a funding mechanism and efficient management of data on plant biodiversity in Côte d'Ivoire (Ivory Coast)

Funding

Funding € 59,131 Co Funding € 124,130 Type Of Grant National grant Financed by the BID Programme

Project contacts

Спасибо



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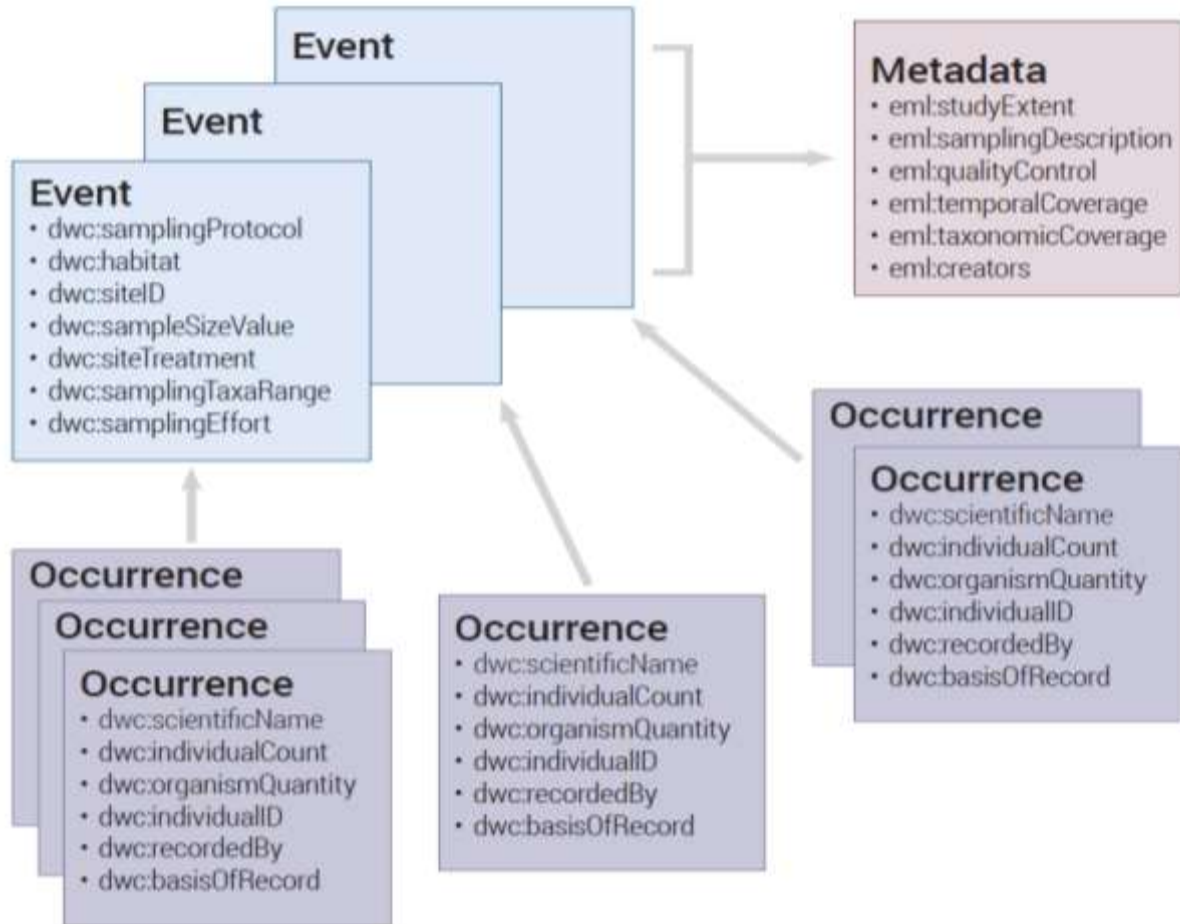


Icones mycologicae, ou Iconographie des champignons de France principalement Discomycetes.,
Paris :P. Klincksieck, L. Lhomme, successeur,1905-10..
biodiversitylibrary.org/page/33662033

SAMPLING-EVENT DATA

Still missing:

A consistent, referenced catalogue of sampling protocol definitions



Also still to come:

- *New proposed DwC terms*
- *More extensive and improved documentation for publishers*
- *Visualization*

GBIF AND DIGITAL OBJECT IDENTIFIERS

The screenshot shows the GBIF.org website interface. At the top, the GBIF.org logo and navigation links (Data, News, Community, About) are visible. The main header features the text "Natural History Museum (London) Colours" and "Occurrence dataset published by Natural History Museum". A green banner on the right displays "4,286,173 Occurrences" and a "View occurrences" button. Below the header, there are tabs for "Information", "Stats", and "Activity". The "Summary" section is active, showing a world map with yellow dots representing georeferenced records. To the right of the map, the text "465,202 Georeferenced records" is displayed. Below this, there are links for "VIEW RECORDS", "DESCRIPTION", and "ABOUT". The "ABOUT" section includes a link "What does this map show?". On the right side of the page, there is a section for "naturgucker.de" with a DOI "doi:10.15468/uc1apo" circled in red. Below this, there is a "PUBLISHED BY" section with the text "naturgucker.de". The "REGISTRATION DATE" is "Jun 24, 2014". The "SERVED BY" section lists "naturgucker.de BioCASE". The "PUBLICATION DATE" is "Feb 11, 2015".

Sharing Detailed Research Data Is Associated with Increased Citation Rate

Heather A. Piwowar*, Roger S. Day, Douglas B. Fridsma

Department of Biomedical Informatics, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania, United States of America

Background. Sharing research data provides benefit to the general scientific community, but the benefit is less obvious for the investigator who makes his or her data available. **Principal Findings.** We examined the citation history of 85 cancer microarray clinical trial publications with respect to the availability of their data. The 48% of trials with publicly available microarray data received 85% of the aggregate citations. Publicly available data was significantly ($p=0.006$) associated with a 69% increase in citations, independently of journal impact factor, date of publication, and author country of origin using linear regression. **Significance.** This correlation between publicly available data and increased literature impact may further motivate investigators to share their detailed research data.

Citation: Piwowar HA, Day RS, Fridsma DB (2007) Sharing Detailed Research Data Is Associated with Increased Citation Rate. PLoS ONE 2(3): e308. doi:10.1371/journal.pone.0000308

INTRODUCTION

Sharing information facilitates science. Publicly sharing detailed research data—sample attributes, clinical factors, patient outcomes, DNA sequences, raw mRNA microarray measurements—with other researchers allows these valuable resources to contribute far beyond their original analysis[1]. In addition to being used to confirm original results, raw data can be used to explore related or new hypotheses, particularly when combined with other publicly available data sets. Real data is indispensable when investigating and developing study methods, analysis techniques, and software implementations. The larger scientific community also benefits: sharing data encourages multiple perspectives, helps to identify errors, discourages fraud, is useful for training new researchers, and increases efficient use of funding and patient population resources by avoiding duplicate data collection.

Believing that that these benefits outweigh the costs of sharing research data, many initiatives actively encourage investigators to make their data available. Some journals, including the *PLoS* family, require the submission of detailed biomedical data to publicly available databases as a condition of publication[2–4]. Since 2003, the NIH has required a data sharing plan for all large funding grants. The growing open-access publishing movement will perhaps increase peer pressure to share data.

However, while the general research community benefits from shared data, much of the burden for sharing the data falls to the study investigator. Are there benefits for the investigators themselves?

A currency of value to many investigators is the number of times their publications are cited. Although limited as a proxy for the scientific contribution of a paper[5], citation counts are often used in research funding and promotion decisions and have even been assigned a salary-increase dollar value[6]. Boosting citation rate is

RESULTS

We studied the citations of 85 cancer microarray clinical trials published between January 1999 and April 2003, as identified in a systematic review by Ntzani and Ioannidis[7] and listed in Supplementary Text S1. We found 41 of the 85 clinical trials (48%) made their microarray data publicly available on the internet. Most data sets were located on lab websites (28), with a few found on publisher websites (4), or within public databases (6 in the Stanford Microarray Database (SMD)[8], 6 in Gene Expression Omnibus (GEO)[9], 2 in ArrayExpress[10], 2 in the NCI GeneExpression Data Portal (GEDP)(gedp.nci.nih.gov); some datasets in more than one location). The internet locations of the datasets are listed in Supplementary Text S2. The majority of datasets were made available concurrently with the trial publication, as illustrated within the WayBackMachine internet archives (www.archive.org/web/web.php) for 25 of the datasets and mention of supplementary data within the trial publication itself for 10 of the remaining 16 datasets. As seen in Table 1, trials published in high impact journals, prior to 2001, or with US authors were more likely to share their data.

The cohort of 85 trials was cited an aggregate of 6239 times in 2004–2005 by 3133 distinct articles (median of 1.0 cohort citation per article, range 1–23). The 48% of trials which shared their data received a total of 5334 citations (85% of aggregate), distributed as shown in Figure 1.

Academic Editor: John Ioannidis, University of Ioannina School of Medicine, Greece

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Piwowar et al.
(2007)
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