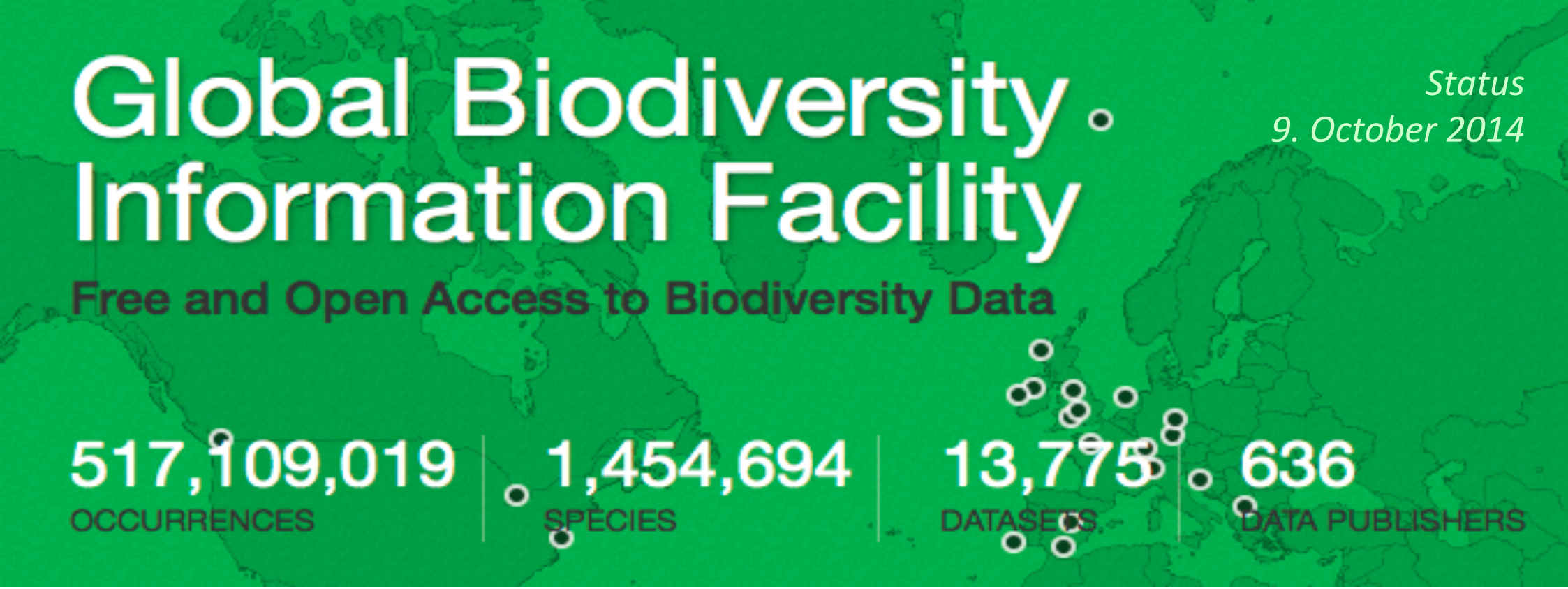
ForBio
Forskerskole i Biosystematikk
Research School in Biosystematics

Species occurrence data

Access to species occurrence data
from GBIF and Artskart

Topics for this session

- Global Biodiversity Information Facility - **GBIF**
- Accessing **biodiversity data** from GBIF
- **Publish** your own biodiversity occurrence data to *Artsobservasjoner* and GBIF

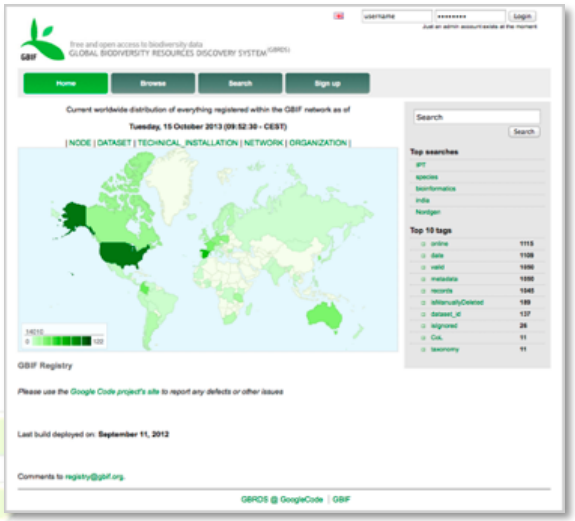


GBIF enables *free and open access to biodiversity data* online.

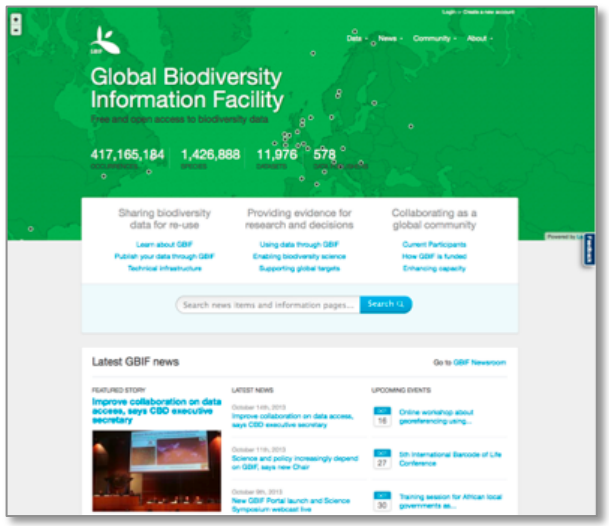
We are an international government-initiated and -funded initiative focused on making biodiversity data available to all and anyone, for scientific research, conservation and sustainable development.

GBIF provides a data discovery system

that is dependent on resolvable stable identifiers for efficient functionality



global registry



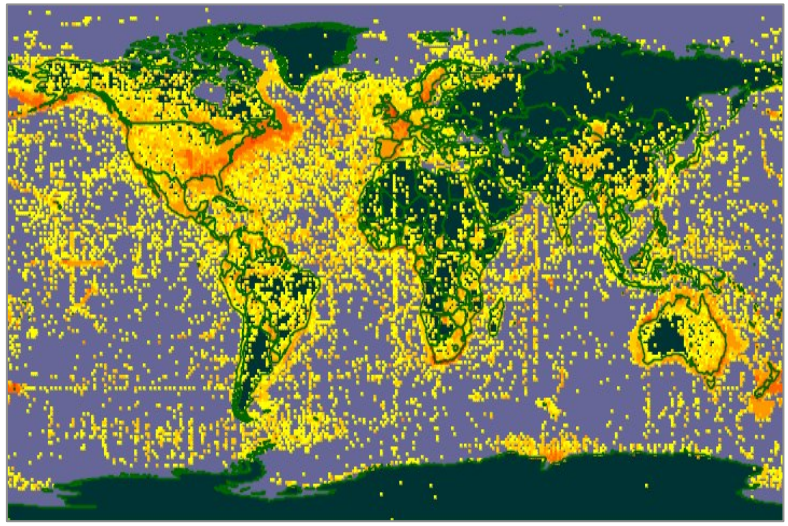
data portal

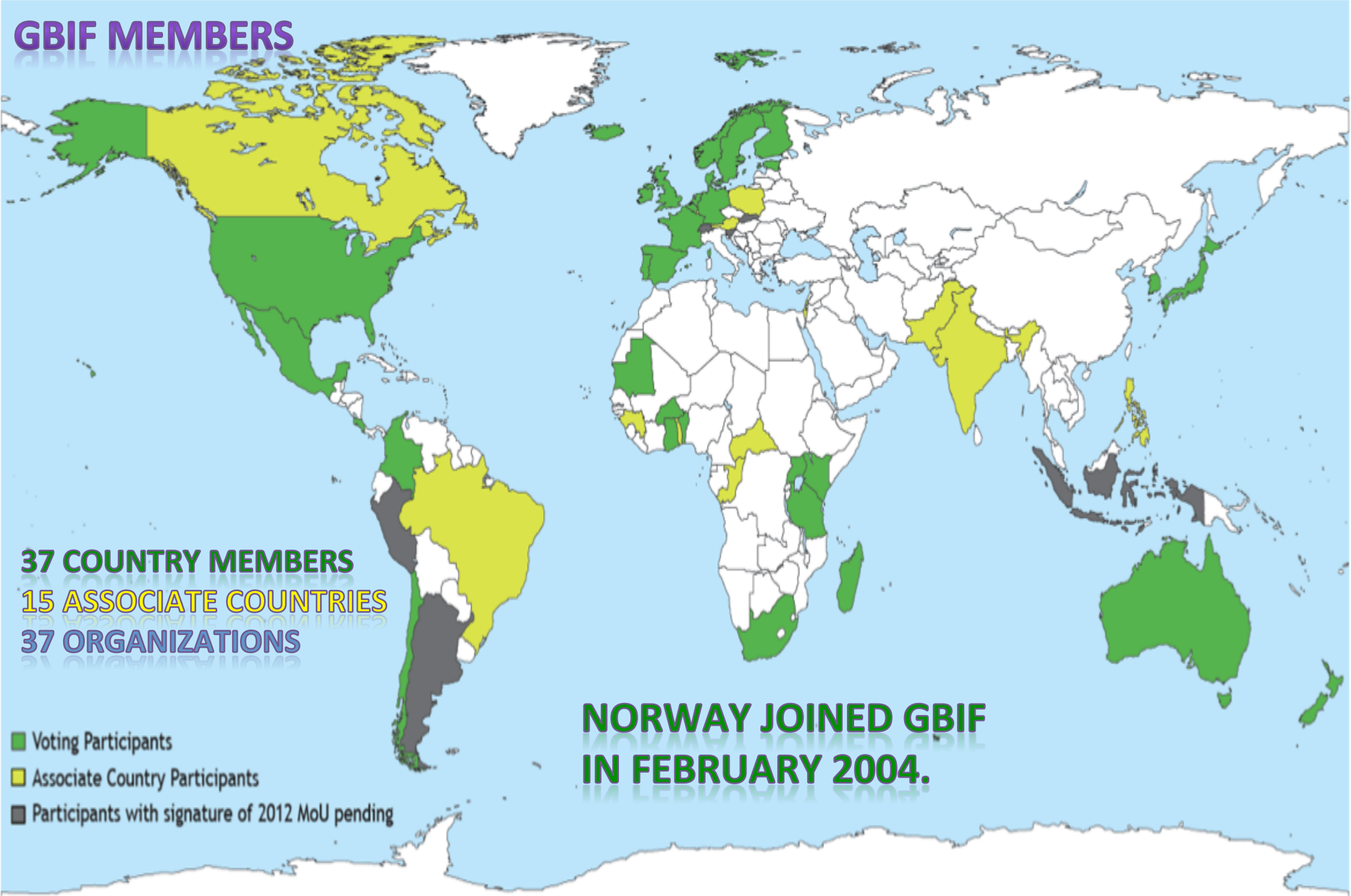
GBIF PROVIDES THREE CORE SERVICES AND PRODUCTS:

1. **Information infrastructure** – an Internet-based index of a globally distributed network of interoperable databases that contain primary biodiversity data.

2. **Community-developed tools, standards and protocols** – the tools data providers need to format and share their data.

3. **Capacity-building and training** – and access to a global expert community.

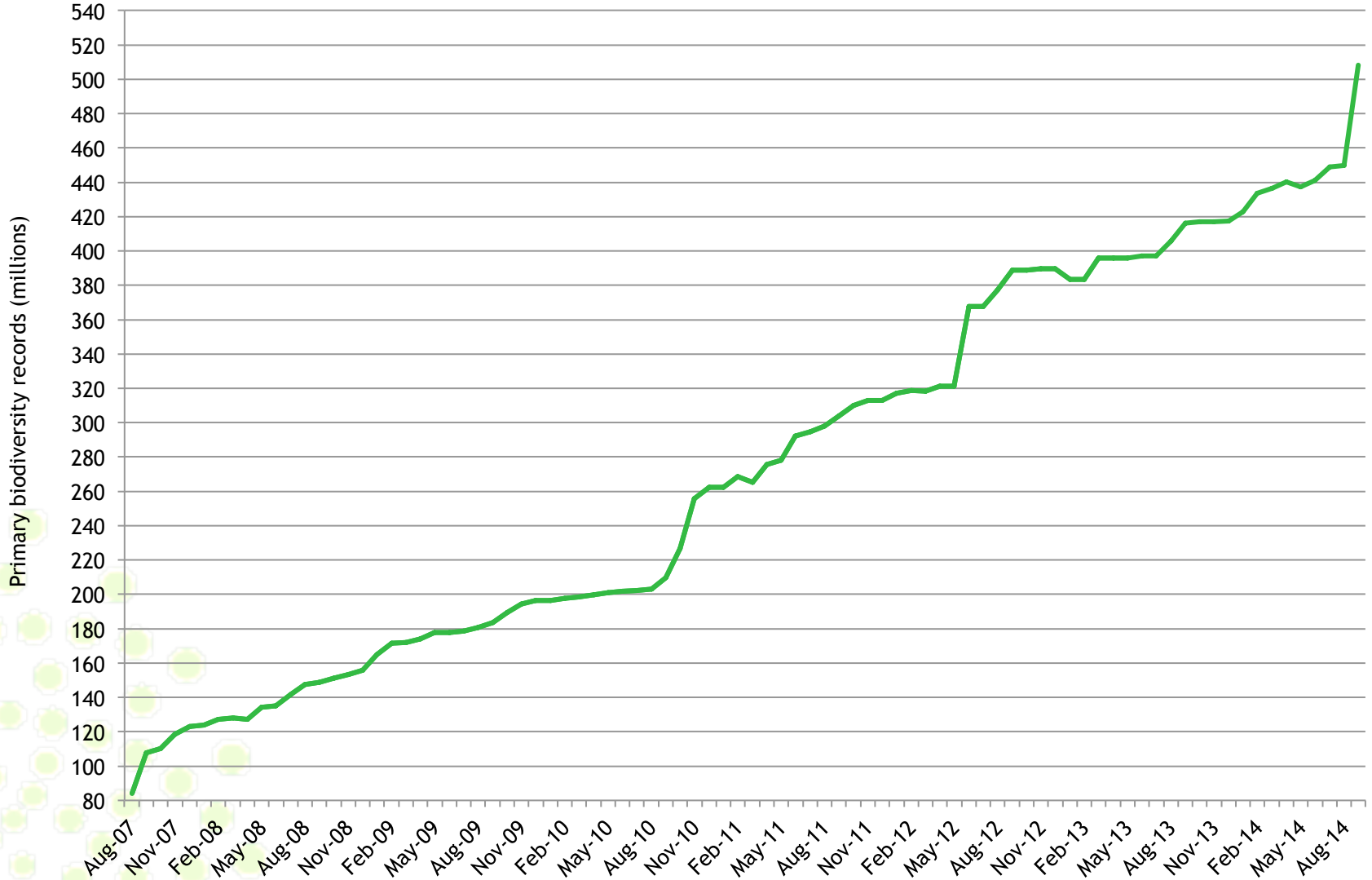




The low membership coverage in Africa and Asia is an important gap!

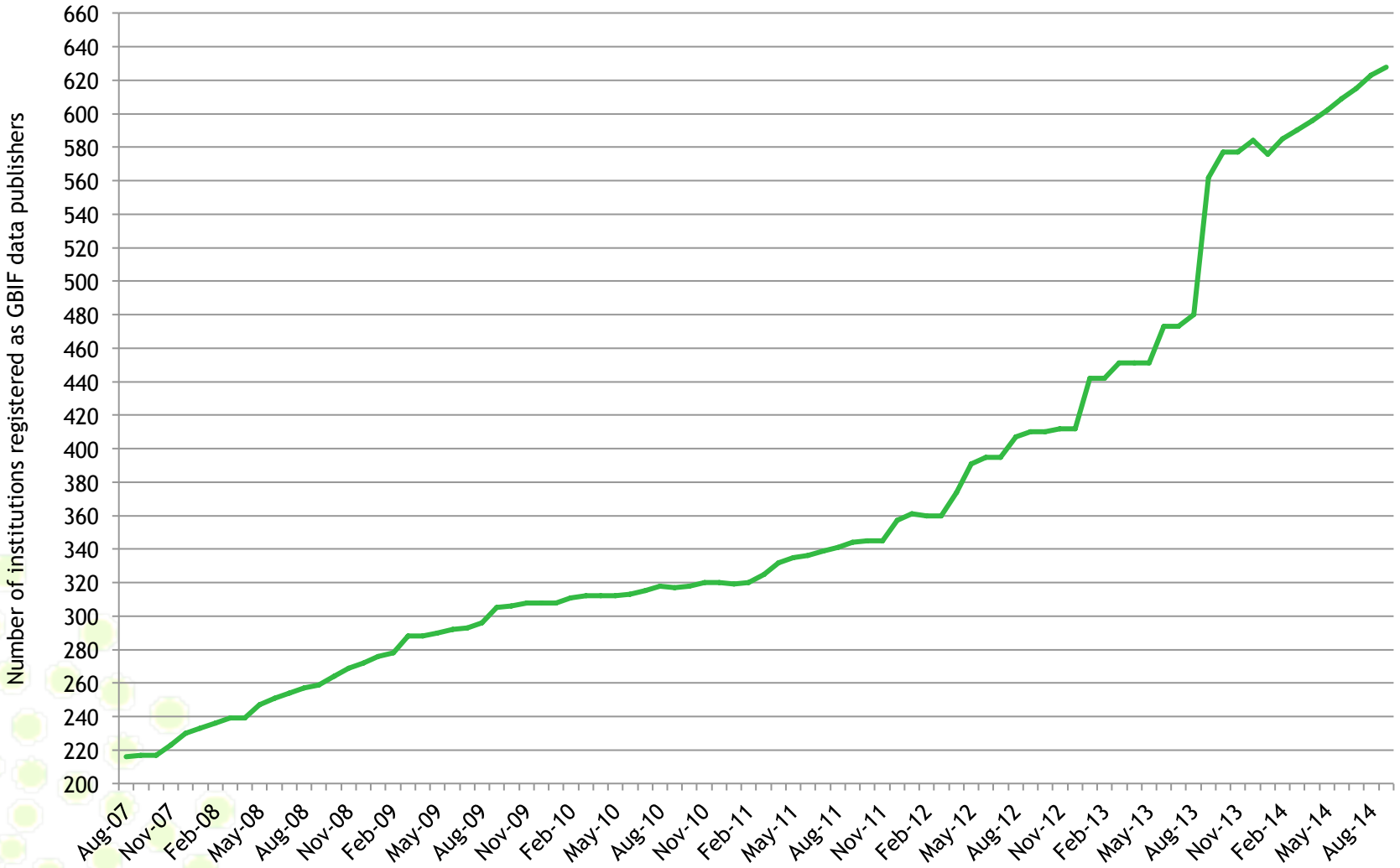
Data publication

Data published through GBIF



Last updated: 2014-09-02

GBIF data publishers



A sharp rise in the number of data publishers in September 2013 results from institutions choosing to register as separate entities rather than sharing datasets through a single publisher at their national node institution.

Last updated: 2014-09-02

Data breakdown by GBIF Participant

Top 10 Participant Countries—Number of new records published
(1 January - 31 August 2014)

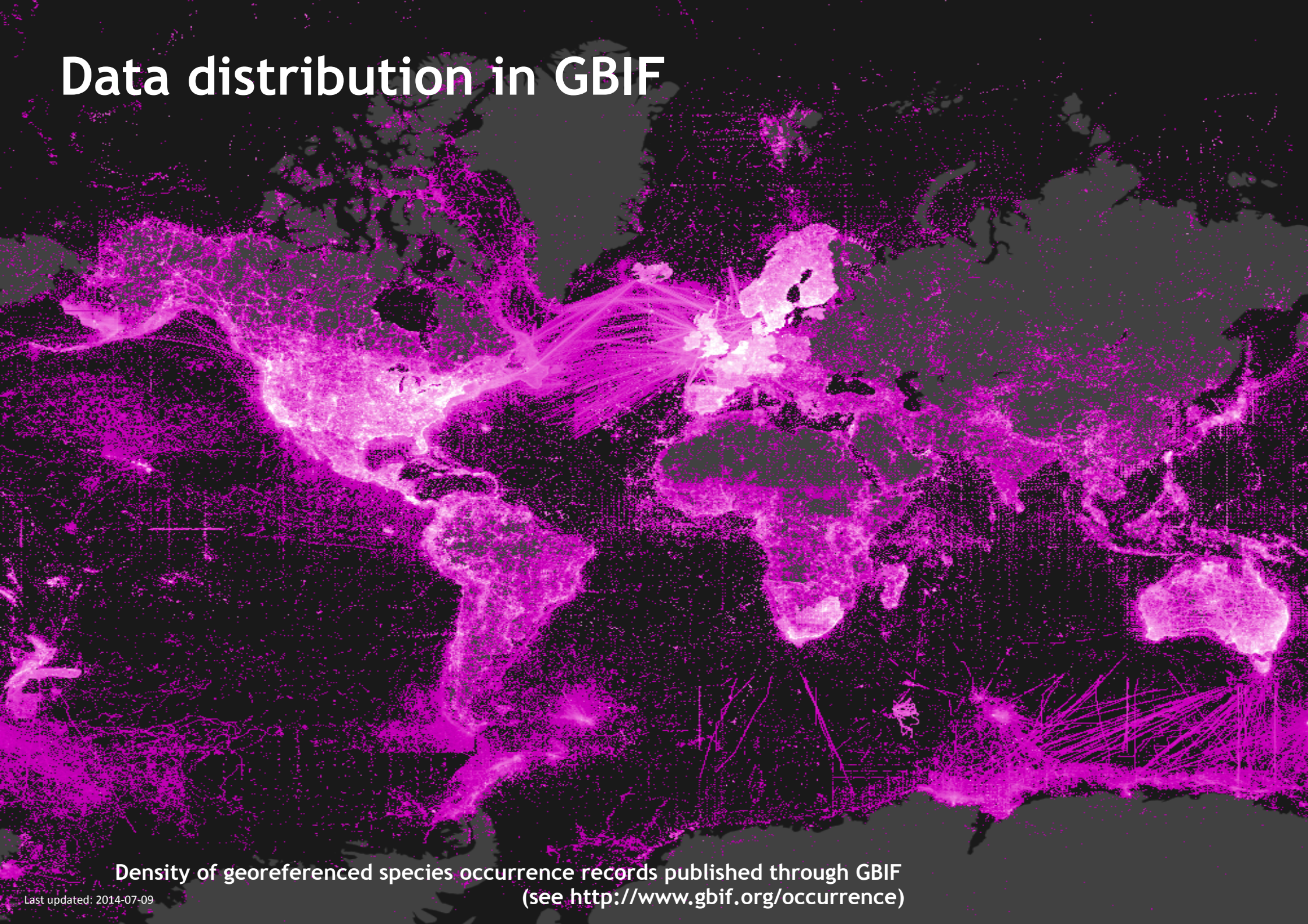
Country	Records published (in millions)
United States	66.8
Netherlands	12.7
Germany	5.7
Australia	5.0
Sweden	3.7
Belgium	1.3
Canada	1.2
Spain	1.1
Finland	1.0
United Kingdom	0.8

Top 10 Participant Countries—Total number of records published
(as of 31 August 2014)

Country	Records published (in millions)
United States	211.6
Sweden	47.9
United Kingdom	42.5
Australia	36.8
Netherlands	18.5
Germany	17.7
Finland	17.0
France	16.7
Norway	13.2
Spain	10.0

Last updated: 2014-09-09

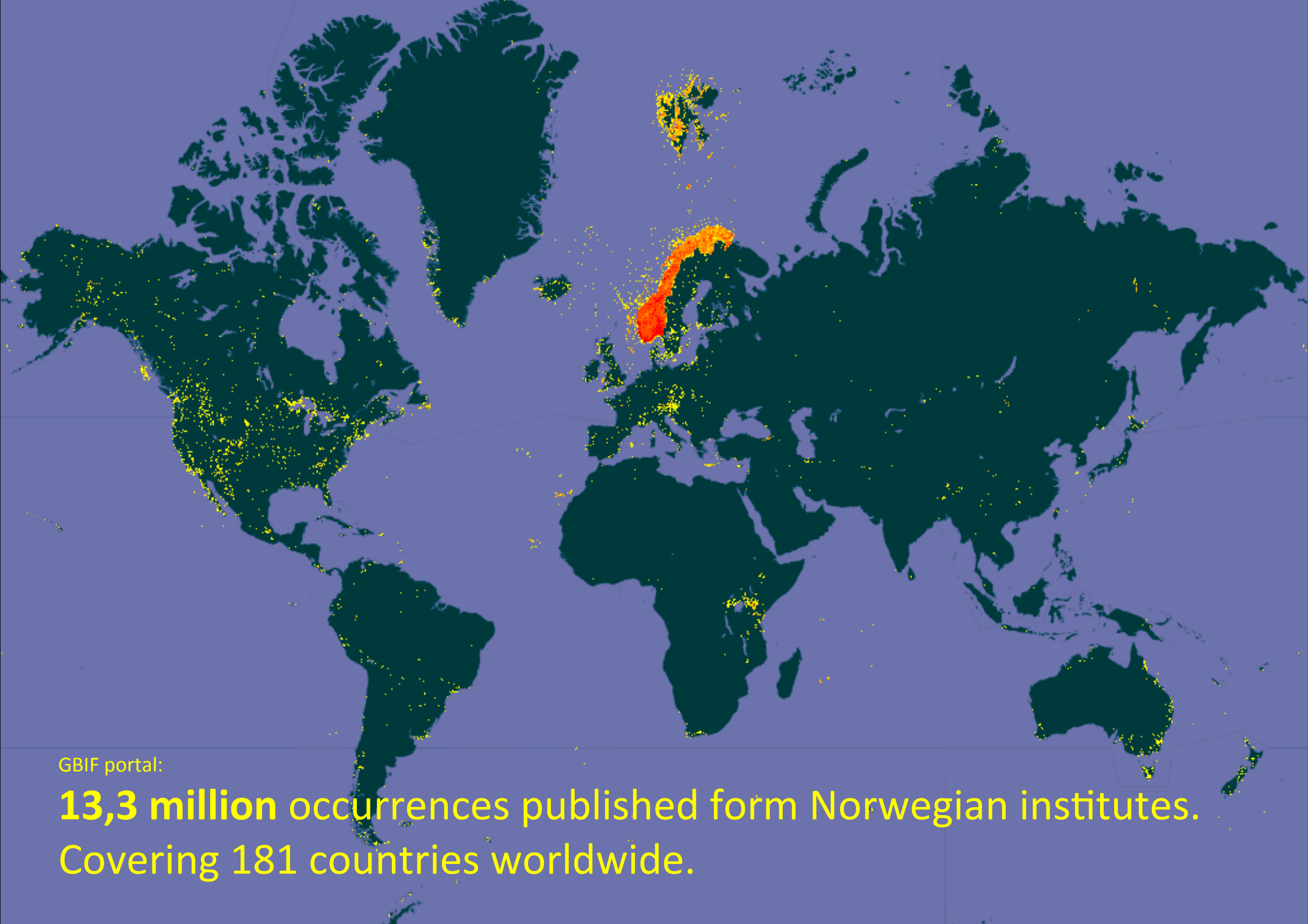
Data distribution in GBIF



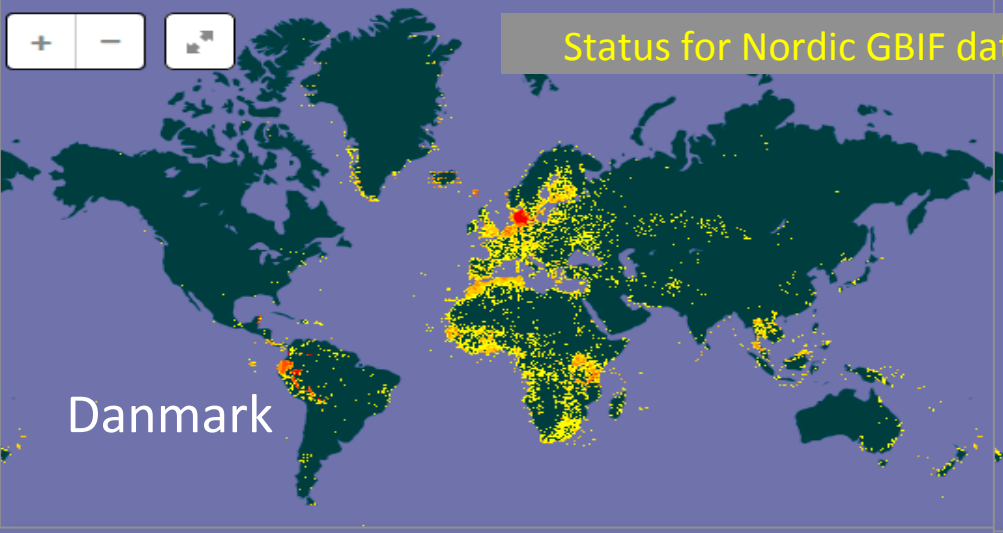
Density of georeferenced species occurrence records published through GBIF
(see http://www.gbif.org/occurrence)

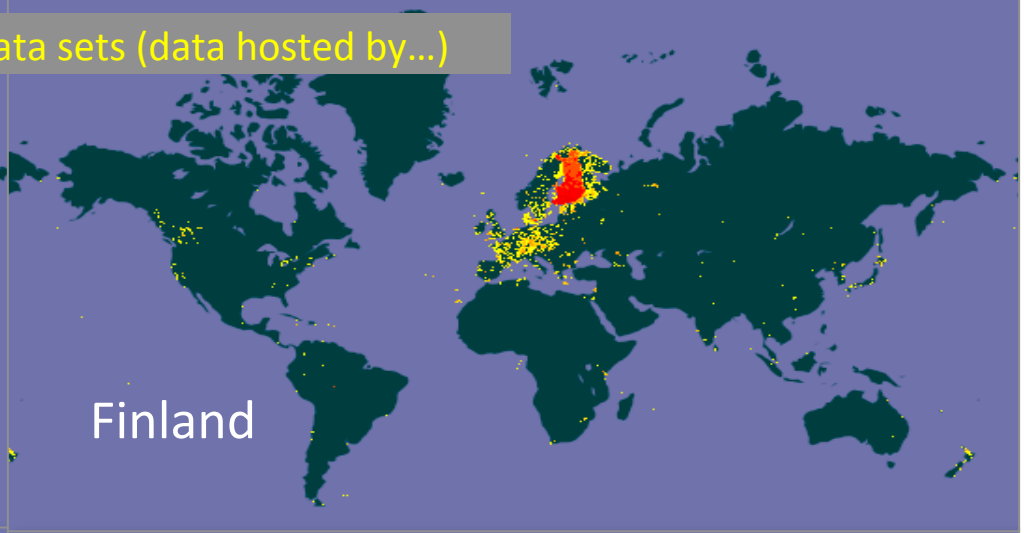
Last updated: 2014-07-09

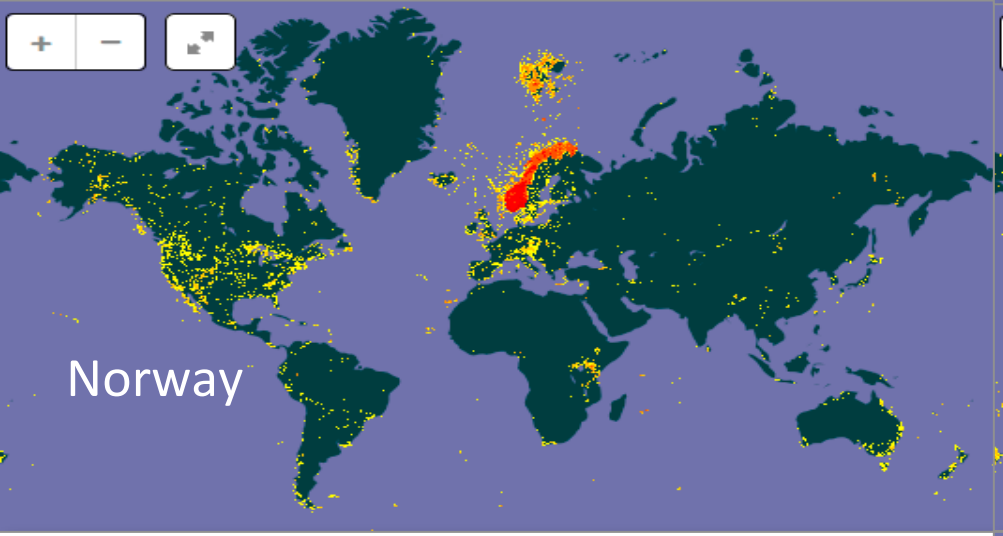
GBIF portal:
14,1 million occurrences are located in Norway.
Published from 31 countries worldwide.
2px

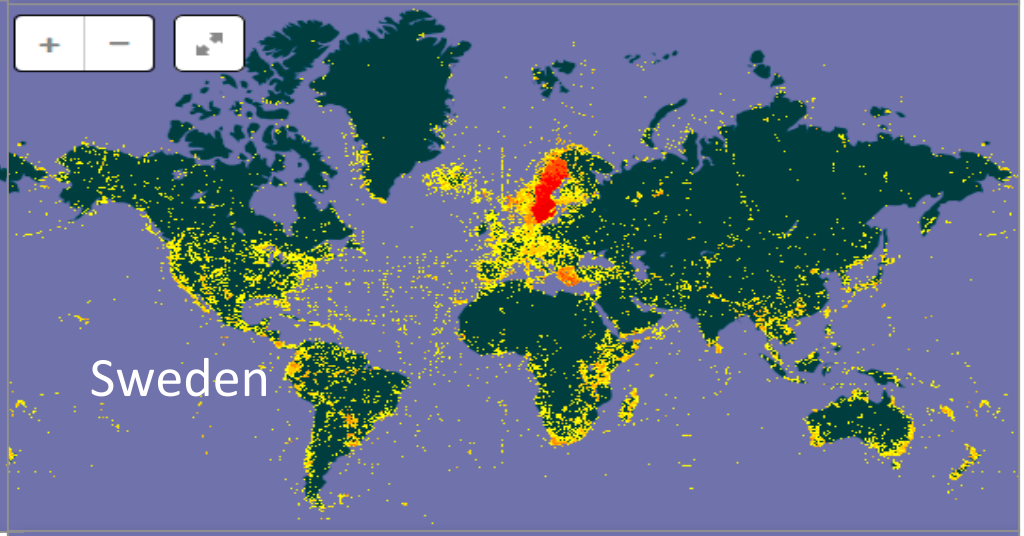

GBIF portal:
13,3 million occurrences published form Norwegian institutes.
Covering 181 countries worldwide.

Status for Nordic GBIF data sets (data hosted by...)

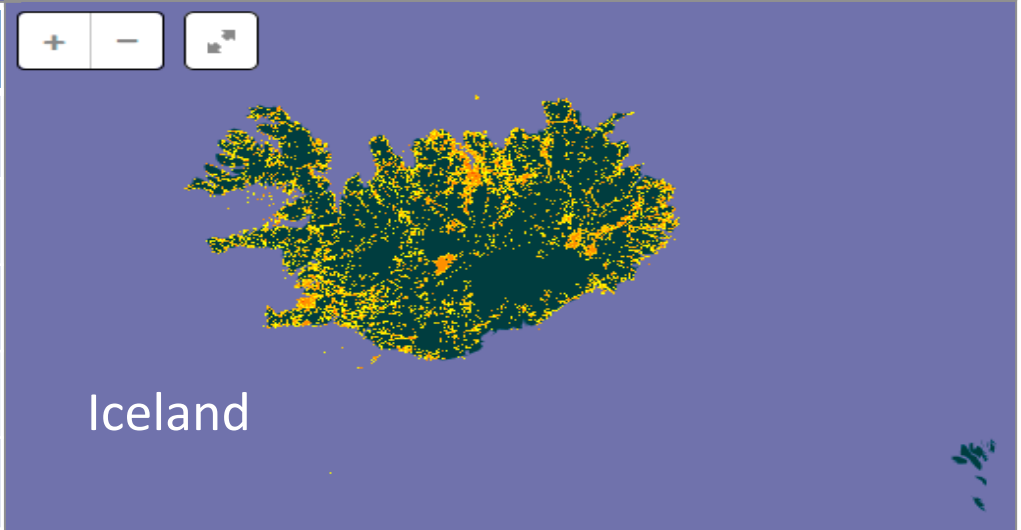








Oct 2014	Data set	Occurences
Denmark	51	9 383 347
Finland	56	17 050 736
Iceland	4	458 705
Norway	85	13 311 032
Sweden	39	47 995 533



http://www.gbif.org/country/NO

GBIF Norway

GBIF Norway

Home
GBIF and GBIF Norway
Personnel

Services

Our datasets
Search our datasets
WAP service

GBIF data portal

GBIF Norway provider page
All Norwegian data
Overview of records hosted in Norway
Overview of records relevant to Norway

Other Norwegian GBIF data providers

MUSIT: Dataset
NINA: Dataset

New datasets

September 12, 2014

Data repatriation of 972 occurrence data from India published from the Norwegian University Museums.

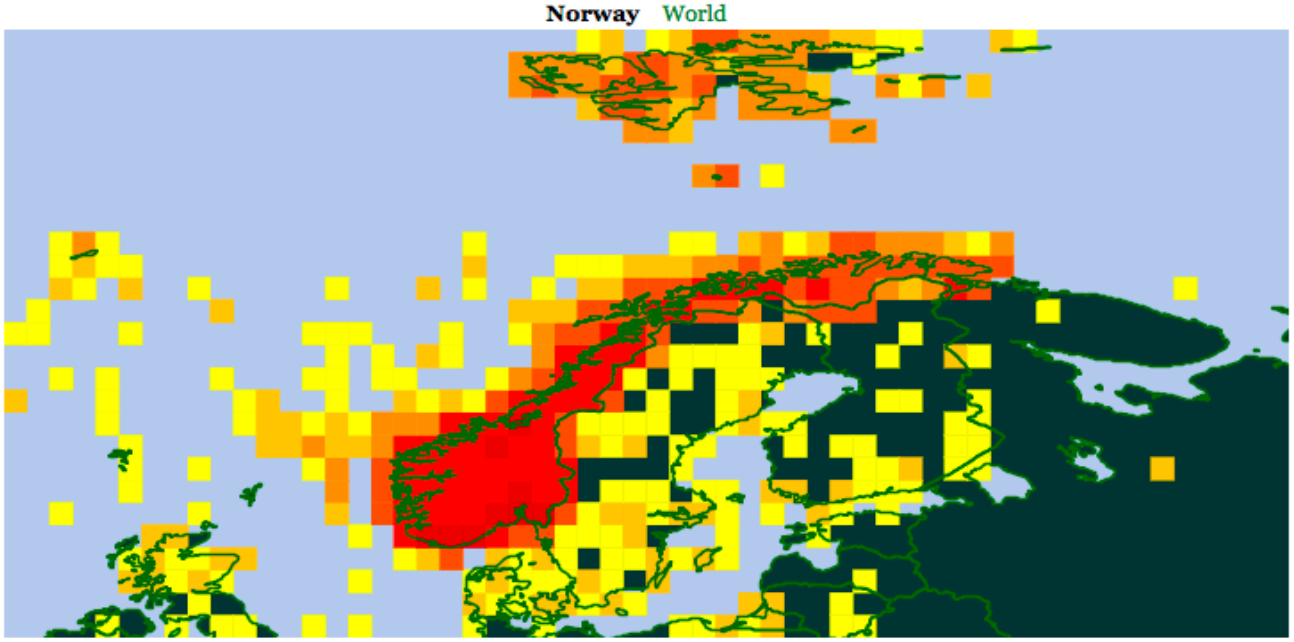
- University Museum of Bergen (30 occurrences [data])
- Natural History Museum in Oslo (678 occurrences of plants [data] and 110 occurrences of animals [data])
- NTNU University Museum in Trondheim (154 occurrences [data])

About GBIF Norway

GBIF Norway is the Norwegian participant node in the Global Biodiversity Information Facility, GBIF.

Our main task is to make primary data on biological diversity from the Norwegian collections and observation databases freely available and to coordinate GBIF-related activities in Norway.

Norway currently supplies **12,531,207** records to the GBIF Network.



Spatial distribution of observation records with geographic coordinates provided by GBIF Norway, 1x1 degree grid.

http://gbif.no

ARTSDATABANKEN

GBIF Norway

"**Artskart**" provides the official Norwegian portal for species occurrences and specimens in Norway.

Search occurrences

Use the filters to customize search results

10,093
Occurrences
Download

10,093 results

Configure Add a filter

- Scientific name
- Location
- Country
- Publishing country
- Collector
- Record number
- Basis of record
- Dataset
- Collection date
- Last modified in GBIF
- Year
- Month
- Catalogue number
- Institution code
- Collection code
- Elevation
- Depth
- Type status
- Multimedia types
- Issues

SCIENTIFIC NAME

Type a scientific name...

FILTERS

Beta vulgaris subsp. maritima L. ✖

	LOCATION	BASIS OF RECORD
998719910 · Cat. 1259597 **Beta vulgaris subsp. maritima L.** Published in Carnet en Ligne	France 43.63/3.86	Human Observation
998719879 · Cat. 1259276 **Beta vulgaris subsp. maritima L.** Published in Carnet en Ligne	France 43.64/3.86	Human Observation
997429524 · Cat. 23610795891970710 **Beta vulgaris subsp. maritima L.** Published in Online Atlas of vascular plants 2012-2020	Ireland 52.15/-7.13	Specimen
997429506 · Cat. 23610795891970709 **Beta vulgaris subsp. maritima L.** Published in Online Atlas of vascular plants 2012-2020	Ireland 51.84/-9.91	Specimen

Feedback

GBIF Portal – download data

- Before downloading species occurrence data from GBIF, please take the time to register.
- http://www.gbif.org/user/register
- Downloads from the GBIF portal are packaged as a Darwin Core Archive (DwC-A).
- http://www.gbif.org/faq/datause
- The species occurrence data are found in the "*occurrence.txt*" data file.
- This tab-delimited text file can be imported to a spreadsheet such as Excel or to a database.
- *NOTE: the data files can become very large! So look at the file size before you open them in MS Excel.*

Dag Endresen

User account and personal settings

Your Downloads

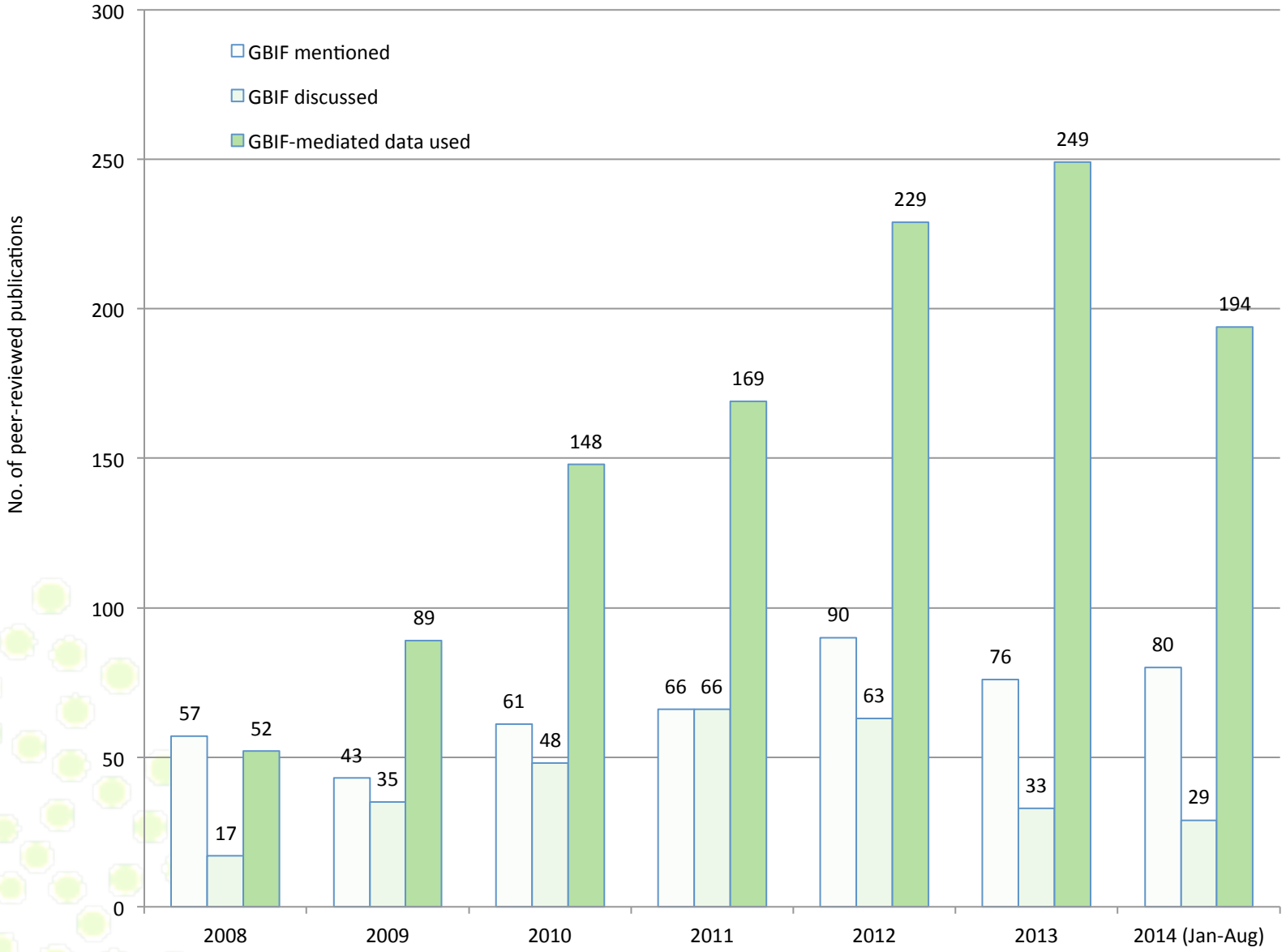
FILTER	DATASET Specimens from India at the University Museum at the University of Bergen
STATUS	Ready for download (15.4 kB 30 records - 1 datasets)
CREATED	Sep 18, 2014

FILTER	DATASET Specimens from India at the NTNU University Museum in Trondheim
STATUS	Ready for download (0 B 154 records - 1 datasets)
CREATED	Sep 18, 2014

FILTER	DATASET Plants from India in the vascular plant herbarium, Natural History Museum at the University of Oslo (NHM-UiO)
STATUS	Ready for download (0 B 678 records - 1 datasets)
CREATED	Sep 18, 2014

Data use in research

GBIF citation in research 2008-2014



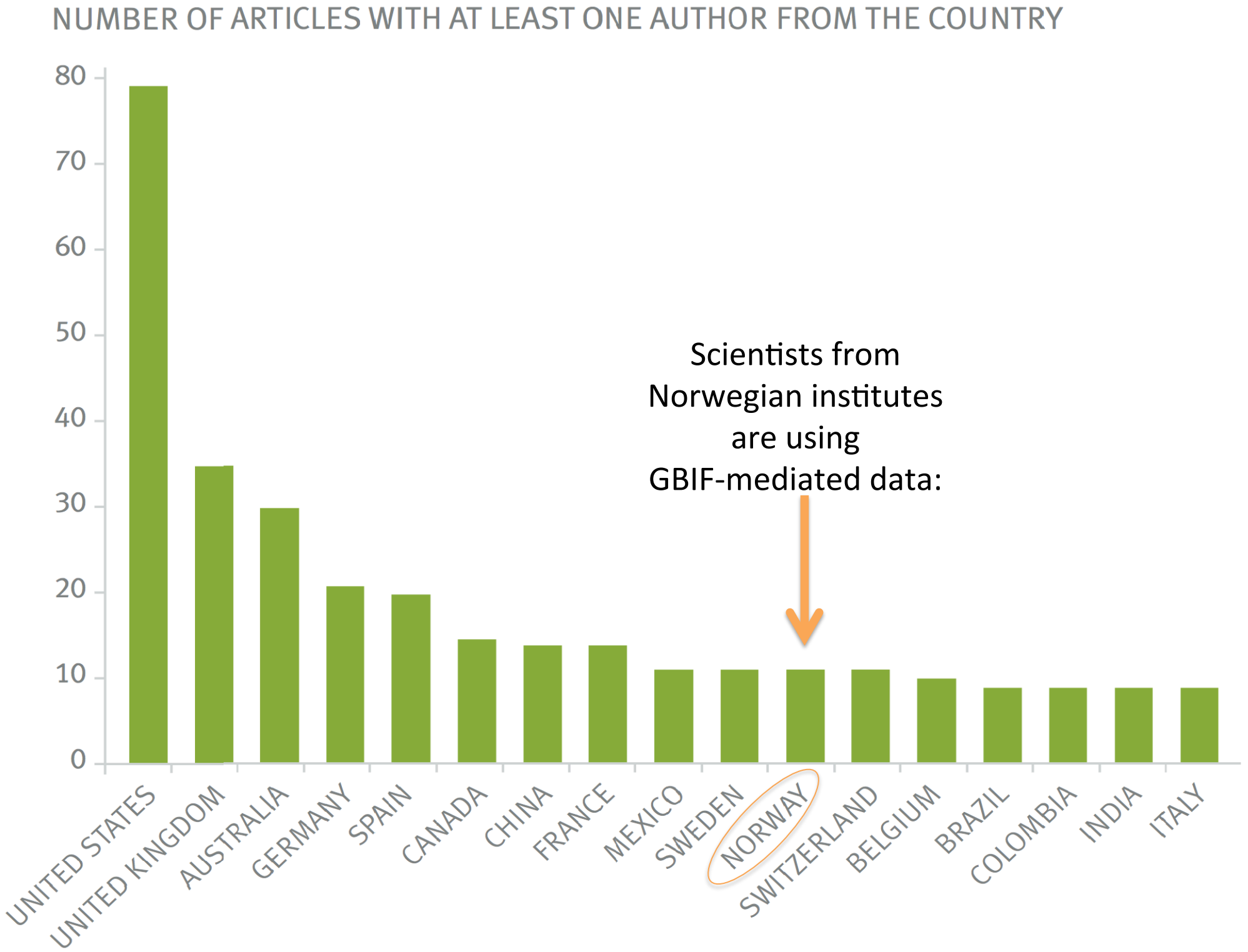
Last updated: 2014-09-02

2014 Research citing use of GBIF, by country of authors

Country	Number of articles
United States	60
United Kingdom	28
Germany	27
Australia	21
Spain	20
Mexico	13
France	11
Brazil	10
Italy	10
South Africa	9

Number of research publications from January to September 2014 citing use of GBIF-mediated data, ranked by country according to affiliation of at least one author. Top 10 countries shown.

Last updated: 2014-09-03


NUMBER OF ARTICLES WITH AT LEAST ONE AUTHOR FROM THE COUNTRY
80
70
60
50
40
30
20
10
0
Scientists from Norwegian institutes are using GBIF-mediated data:
UNITED STATES
UNITED KINGDOM
AUSTRALIA
GERMANY
SPAIN
CANADA
CHINA
FRANCE
MEXICO
SWEDEN
NORWAY
SWITZERLAND
BELGIUM
BRAZIL
COLOMBIA
INDIA
ITALY

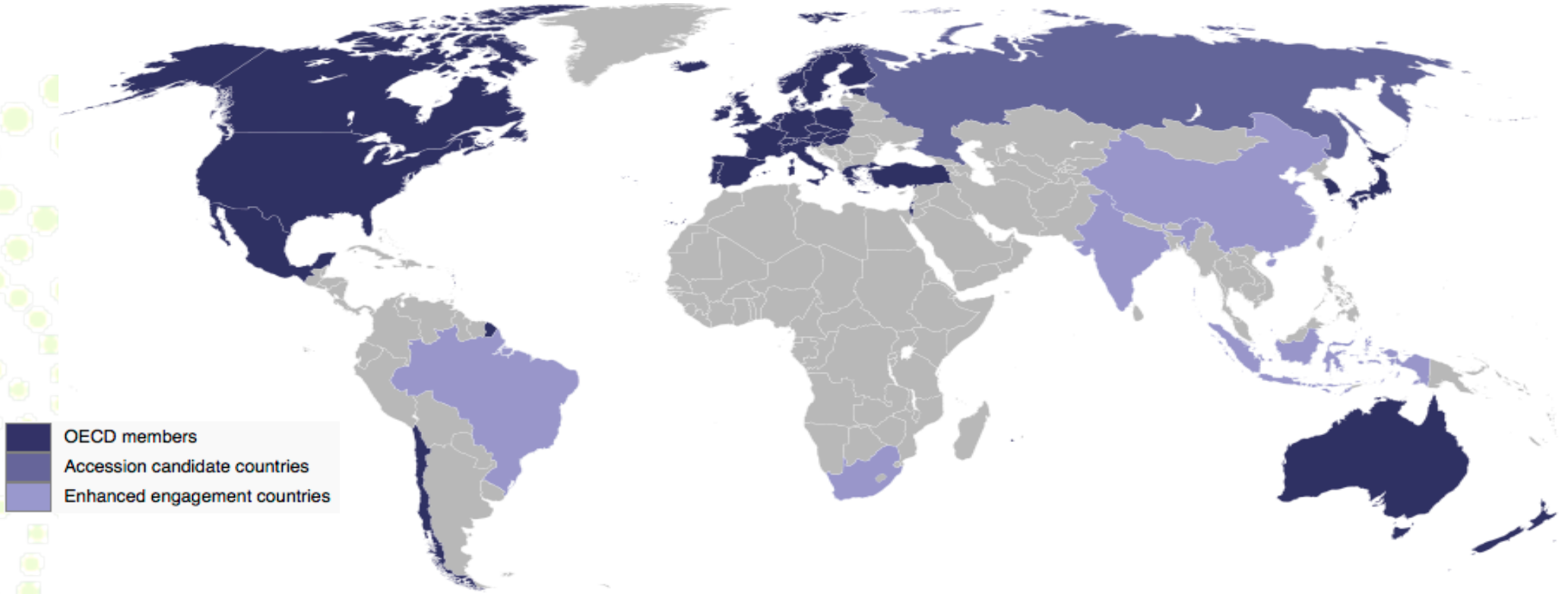
Why GBIF?

THE OECD ORIGIN…

OECD
ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

OECD Global Science Forum (1999):

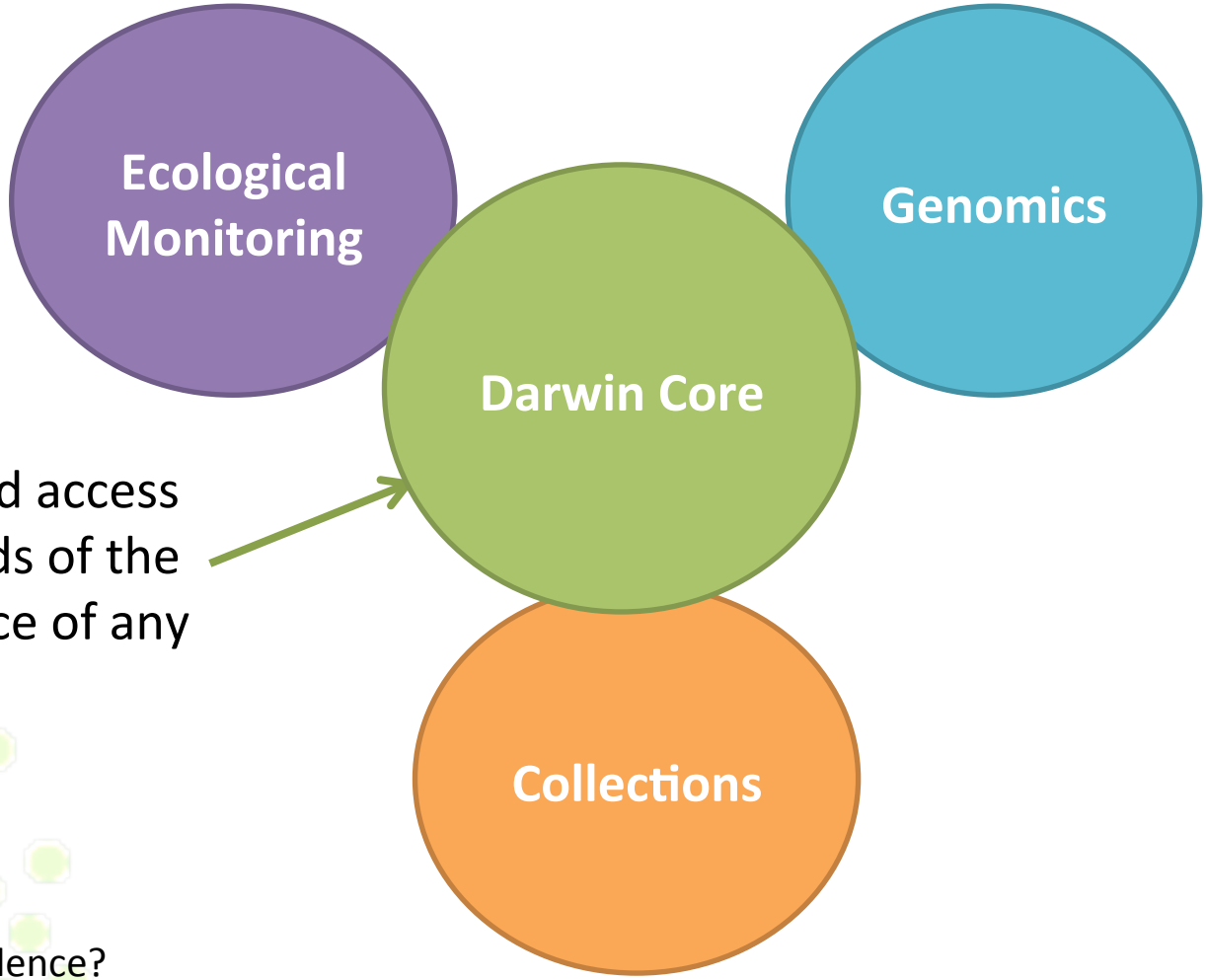
"establish and support a distributed system of interlinked and interoperable modules (databases, software and networking tools, search engines, analytical algorithms, etc.) that together will form a Global Biodiversity Information Facility (GBIF)".



GBIF's unique role

- Registry of biodiversity data resources.
- Tools and support for biodiversity data publication.
- Network development at national, regional and global levels.
- Global virtual natural history collection.
- Cross-domain linkage between data from collections, ecology and genomics.
- Access to global biodiversity data for GIS analysis and environmental monitoring.
  - Aggregated presence data
  - Site-based survey data (samples, presence/absence)

Unifying species data

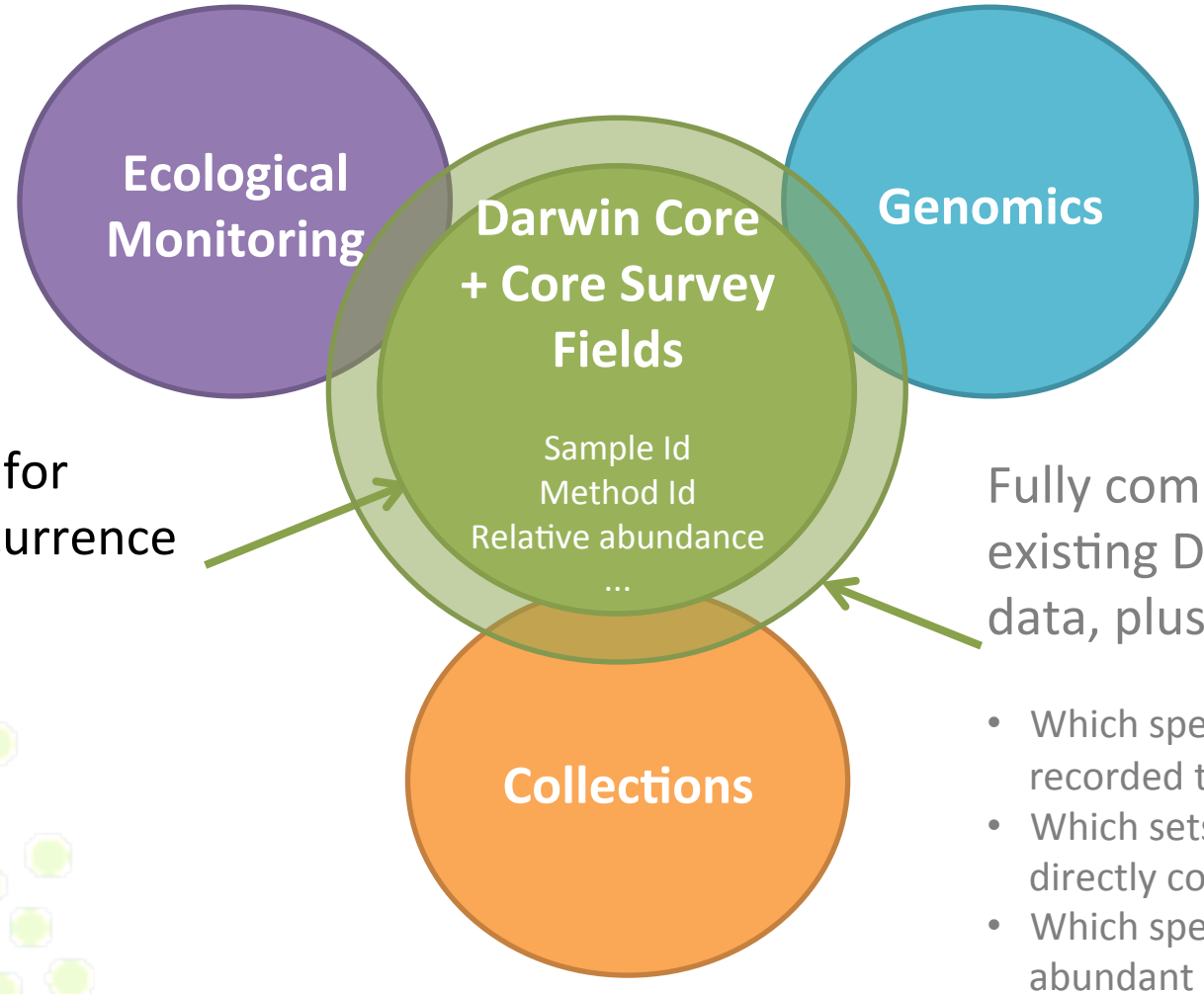


Integrated access for records of the occurrence of any species:

- What?
- When?
- Where?
- What evidence?
- Data owner?
- Link to full record

Presence only

Unifying species data



Integrated access for records of the occurrence of any species:

- What?
- When?
- Where?
- What evidence?
- Data owner?
- Link to full record

Presence only data

Fully compatible with existing Darwin Core data, plus:

- Which species were recorded together?
- Which sets of data are directly comparable?
- Which species were most abundant in each sample?

Presence/absence

WHY IS GBIF IMPORTANT?

The Millennium Ecosystem Assessment showed that human actions often lead to irreversible losses in the diversity of life, and these losses have been more rapid in the past 50 years than ever before in human history.

Biological diversity is key to resilience – the ability of natural and social systems to adapt to change, and is essential for nearly every aspect of human well-being.

Because human threats to biodiversity occur across large spatial and temporal scales, biodiversity and ecosystem monitoring, forecasting, and risk assessments require data to be organized in a globally-accessible, integrated infrastructure.

GBIF provides this infrastructure.

GBIF and GEO

Intergovernmental group on earth observations

GEO BON

Biodiversity observation network

Data Integration & Interoperability

GBIF provides the infrastructure delivering species occurrence data in GEO.

GIASIP

CBD

Global Invasive Alien Species Information Partnership

GBIF provides the infrastructure delivering species occurrence data in GIASIP.

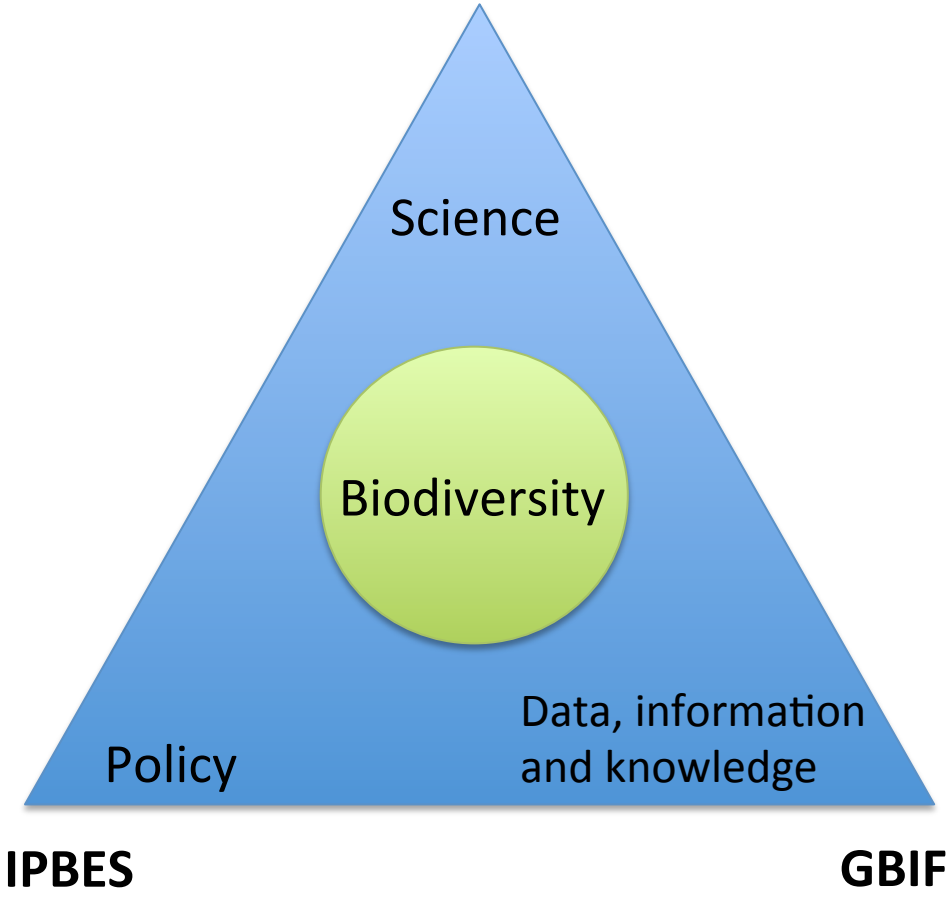
GBIF and IPBES (Naturpanelet)

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

IPBES provides information to support policy decisions and scientific research on biodiversity.

GBIF operate within data, information and knowledge domain of biodiversity informatics.

GBIF provides the infrastructure delivering species occurrence data in IPBES.



Organizational partnerships

- Taxon names and nomenclature
  - Catalog of Life (CoL)
  - IPT to publish global and regional species databases
  - GBIF infrastructure to support construction of CoL
- Biodiversity literature
  - Biodiversity Heritage Library (BHL)
  - User annotations to extract occurrence records
  - Link original (and other) descriptions to taxonomy
- Species information and traits
  - Encyclopedia of Life (EoL)
  - Support EOL as global species information aggregator
  - Include EOL summary box on each GBIF species page

Catalogue of Life

BHL

eol
Encyclopedia of Life

Biodiversity data

Fitness for use

Definition

Data quality is a concept relative to the intended data usage...

"The general intent of describing the quality of a particular dataset or record is to describe the fitness of that dataset or record for a particular use that one may have in mind for the data."

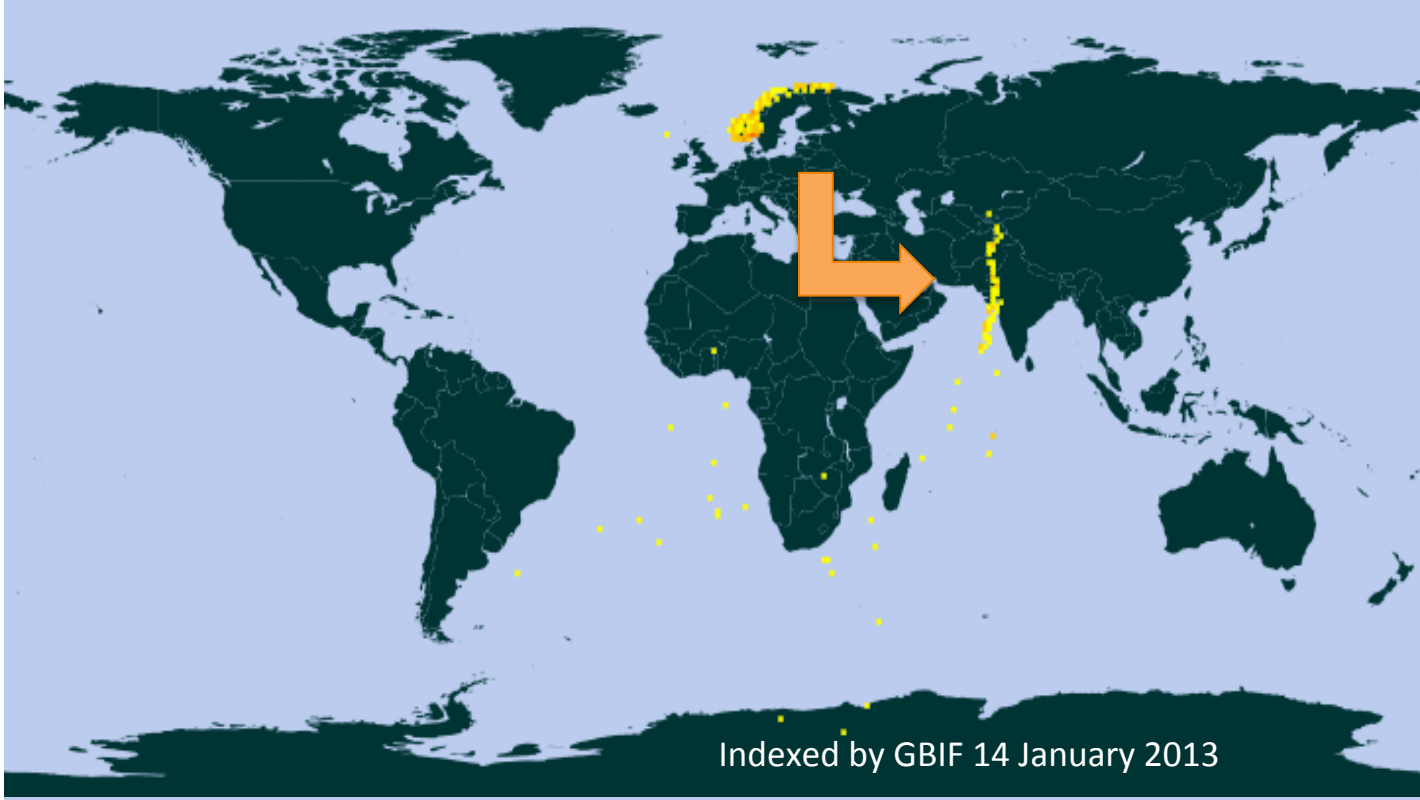
Chrisman, 1991

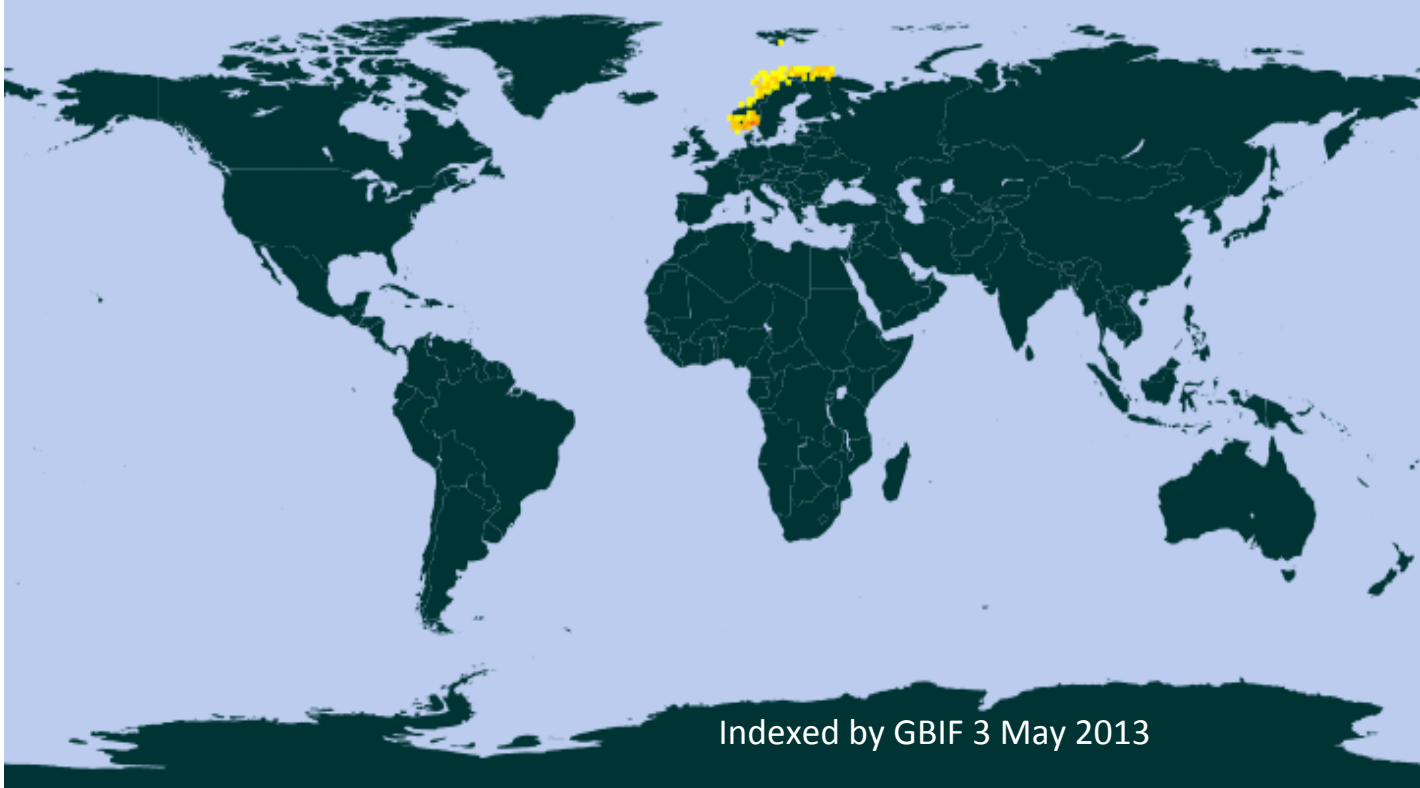
Improving the data quality

The fish collection at NHM had some of the longitude latitude coordinate values swapped…

Noticed and corrected in April 2013.

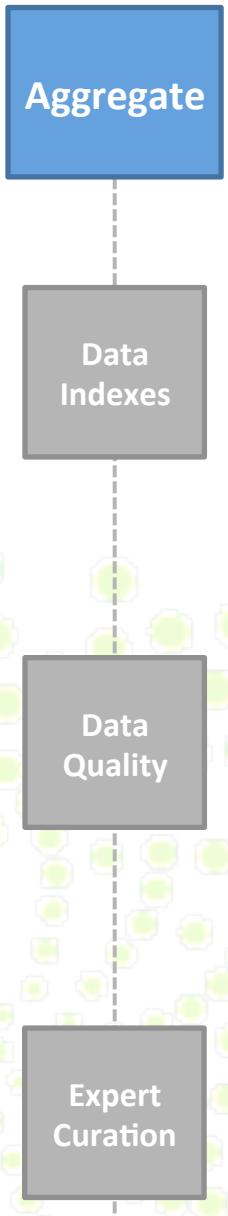
(dataset 8102)





Slide by Donald Hobern, 2012

Improving fitness-for-use



- Progressive improvement
  - Data indexes
    - Centralised discovery
    - Standardisation of persistent identifiers
    - Consistent metadata
  - Data quality
    - Inconsistencies within records
    - Validation against metadata
    - Outlier detection
    - Metrics per record and per data set
  - Expert curation
    - Interface with taxon expert groups
    - Incorporate findings of data users
    - Need efficient researcher-friendly tools

Taxonomic data

Names are often the first point of entry to biodiversity databases.

=> Risk of error propagation

Possible errors:

- Wrong identification
- Wrong format
- Spelling errors

The problem with scientific names

- No comprehensive catalog of species.
- Names ≠ species.
- The species problem – species concepts.
- Competing classifications / phylogenies.
- Many names for one taxon.
- One name for many taxa.
- '*Names*' are more than code-compliant scientific names.

Proposed solution

- Inclusive list of names
  - Accommodate alternate perspectives.
- Reconciliation
  - Map names among and between each other.
- Disambiguation
  - Context to assign homonymic names to rightful place.

Catalogue of Life
indexing the world's known species

Species 2000 ITIS

global names
managing names, serving biology

Architecture

Architecture

- Global registry for resource discovery
- Common and documented data standards
  - Metadata standards
  - Data standards
  - Vocabularies
- Data sharing tools
- Common web service methods
- Resolvable identifiers

Darwin Core – a vocabulary of terms

Wieczorek J, Bloom D, Guralnick R, Blum S, Döring M, De Giovanni R, Robertson T, and Vieglais D (2012) Darwin Core: An Evolving Community-Developed Biodiversity Data Standard. *PLoS ONE* 7(1): e29715. (doi:10.1371/journal.pone.0029715)

Record-level Terms

dcterms:type | dcterms:modified | dcterms:language | dcterms:rights | dcterms:rightsHolder | dcterms:accessRights | dcterms:bibliographicCitation | dcterms:references

institutionID | collectionID | datasetID | institutionCode | collectionCode | datasetName | ownerInstitutionCode | basisOfRecord | informationWithheld | dataGeneralizations | dynamicProperties

Occurrence

occurrenceID | catalogNumber | occurrenceRemarks | recordNumber | recordedBy | individualID | individualCount | sex | lifeStage | reproductiveCondition | behavior | establishmentMeans | occurrenceStatus | preparations | disposition | otherCatalogNumbers | previousIdentifications | associatedMedia | associatedReferences | associatedOccurrences | associatedSequences | associatedTaxa

Event

eventID | samplingProtocol | samplingEffort | eventDate | eventTime | startDayOfYear | endDayOfYear | year | month | day | verbatimEventDate | habitat | fieldNumber | fieldNotes | eventRemarks

dcterms:Location

locationID | higherGeographyID | higherGeography | continent | waterBody | islandGroup | island | country | countryCode | stateProvince | county | municipality | locality | verbatimLocality | verbatimElevation | minimumElevationInMeters | maximumElevationInMeters | verbatimDepth | minimumDepthInMeters | maximumDepthInMeters | minimumDistanceAboveSurfaceInMeters | maximumDistanceAboveSurfaceInMeters | locationAccordingTo | locationRemarks | verbatimCoordinates | verbatimLatitude | verbatimLongitude | verbatimCoordinateSystem | verbatimSRS | decimalLatitude | decimalLongitude | geodeticDatum | coordinateUncertaintyInMeters | coordinatePrecision | pointRadiusSpatialFit | footprintWKT | footprintSRS | footprintSpatialFit | georeferencedBy | georeferencedDate | georeferenceProtocol | georeferenceSources | georeferenceVerificationStatus | georeferenceRemarks

GeologicalContext

geologicalContextID | earliestEonOrLowestEonothem | latestEonOrHighestEonothem | earliestEraOrLowestErathem | latestEraOrHighestErathem | earliestPeriodOrLowestSystem | latestPeriodOrHighestSystem | earliestEpochOrLowestSeries | latestEpochOrHighestSeries | earliestAgeOrLowestStage | latestAgeOrHighestStage | lowestBiostratigraphicZone | highestBiostratigraphicZone | lithostratigraphicTerms | group | formation | member | bed

Identification

identificationID | identifiedBy | dateIdentified | identificationReferences | identificationVerificationStatus | identificationRemarks | identificationQualifier | typeStatus

Taxon

taxonID | scientificNameID | acceptedNameUsageID | parentNameUsageID | originalNameUsageID | nameAccordingToID | namePublishedInID | taxonConceptID | scientificName | acceptedNameUsage | parentNameUsage | originalNameUsage | nameAccordingTo | namePublishedIn | namePublishedInYear | higherClassification | kingdom | phylum | class | order | family | genus | subgenus | specificEpithet | infraspecificEpithet | taxonRank | verbatimTaxonRank | scientificNameAuthorship | vernacularName | nomenclaturalCode | taxonomicStatus | nomenclaturalStatus | taxonRemarks

Auxiliary Terms

http://rs.tdwg.org/terms/

ResourceRelationship

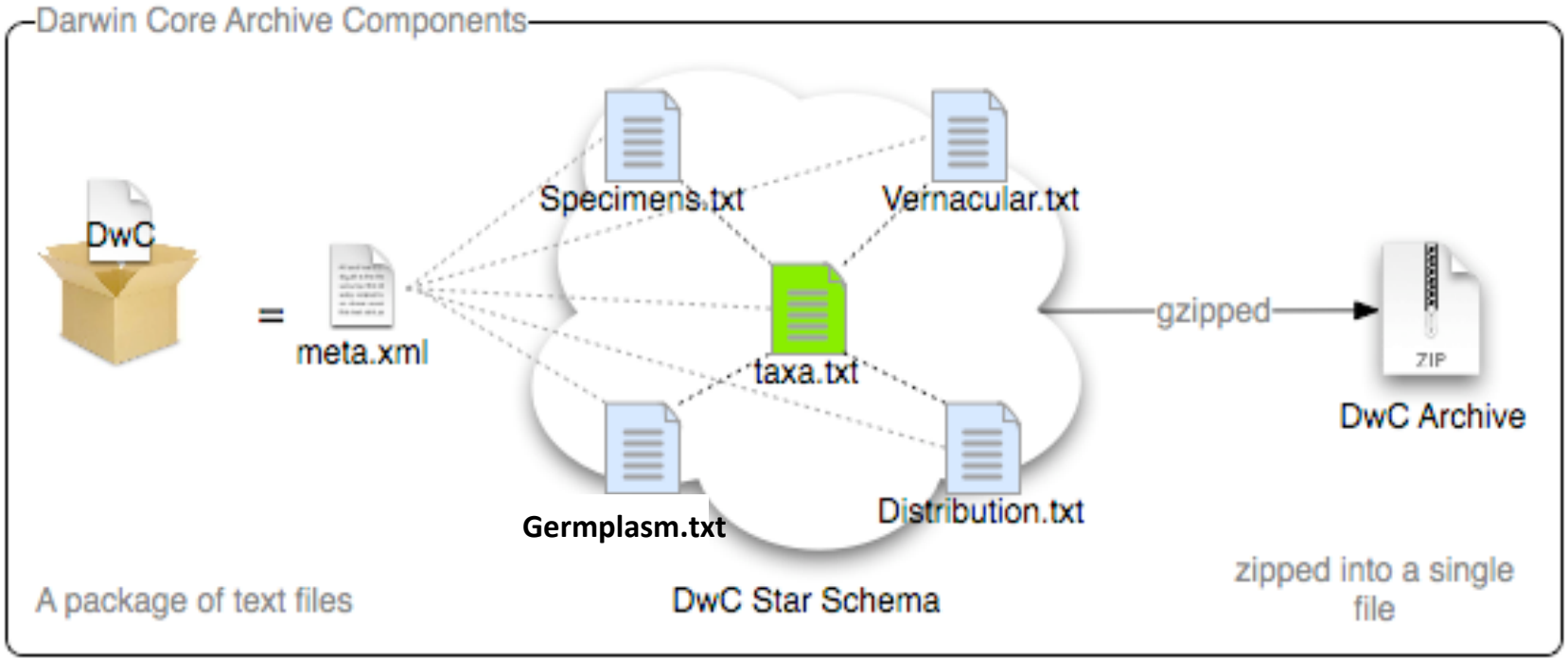
resourceRelationshipID | resourceID | relatedResourceID | relationshipOfResource | relationshipAccordingTo | relationshipEstablishedDate | relationshipRemarks

MeasurementOrFact

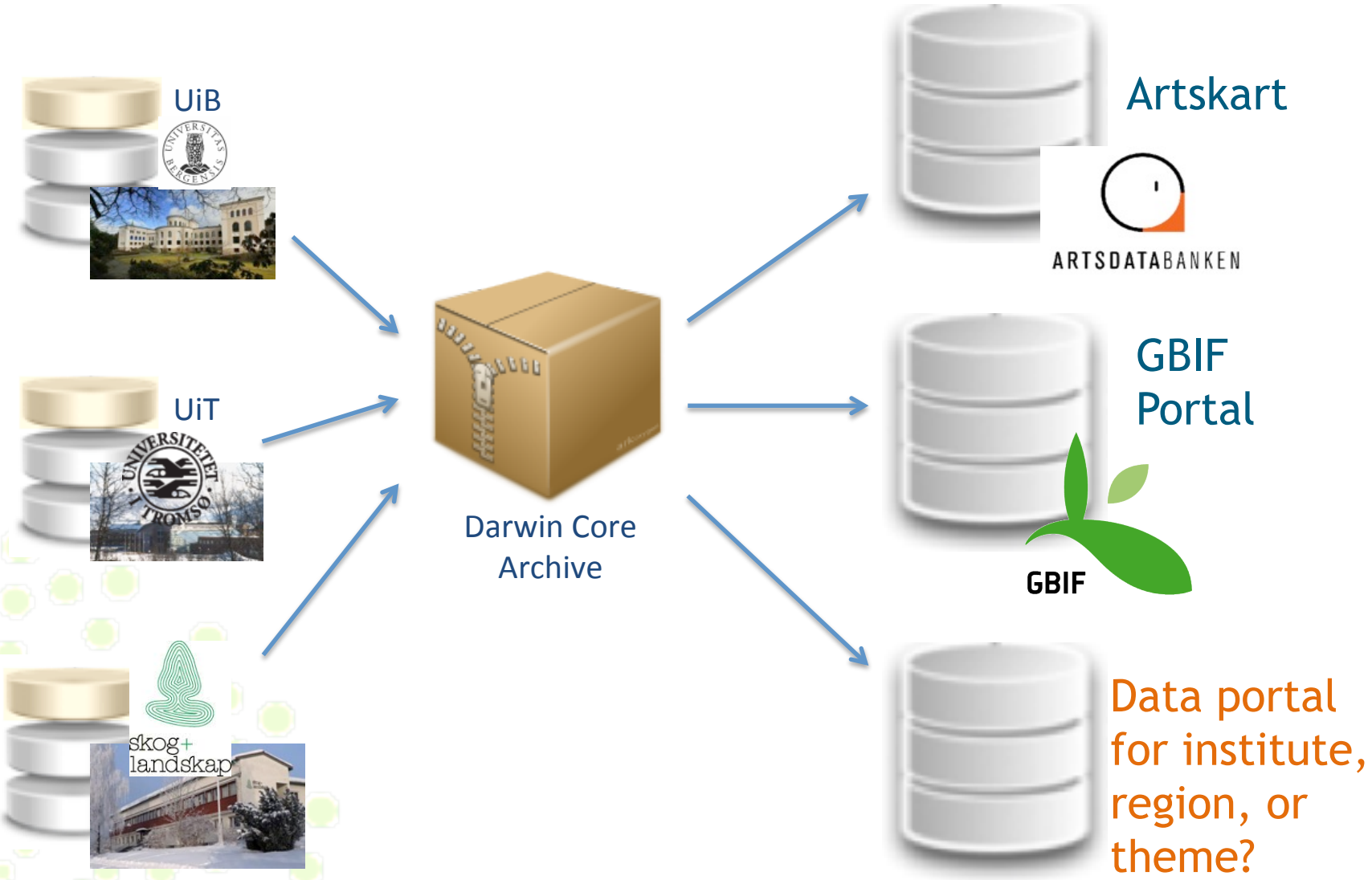
measurementID | measurementType | measurementValue | measurementAccuracy | measurementUnit | measurementDeterminedDate | measurementDeterminedBy | measurementMethod | measurementRemarks

Darwin Core Archive (DwC-A)

- DwC-A publish DwC records including terms from DwC-A extensions.
- Simple text based format.
- Zipped single file archive.

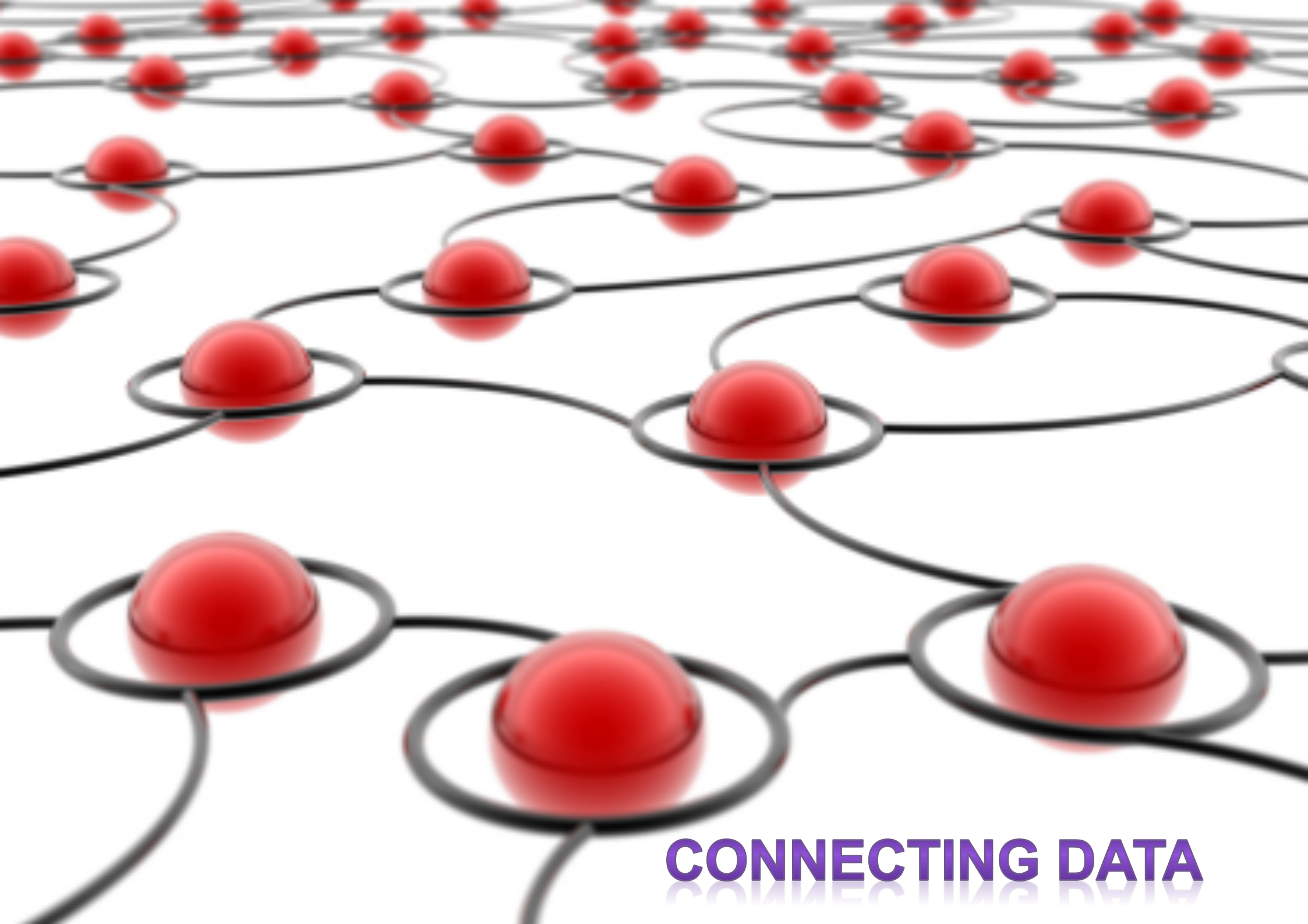


Opportunities with Darwin Core:



Collections and data sets published from the data owner as Darwin Core archives (DwC-As). **Different data types** from the same DwC-A can be included to **different data portals**.

Identifiers


CONNECTING DATA

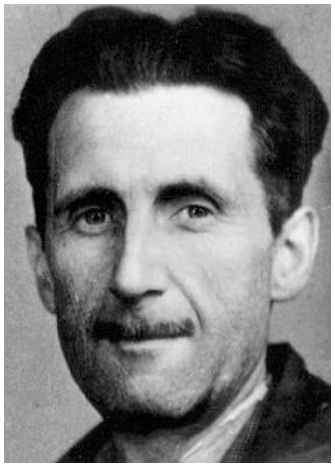
The purpose of identifiers

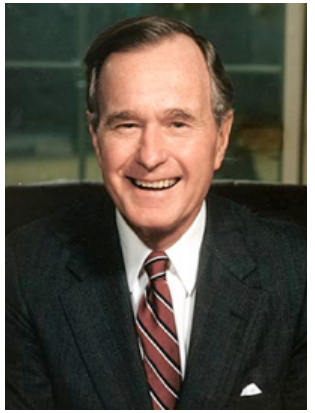
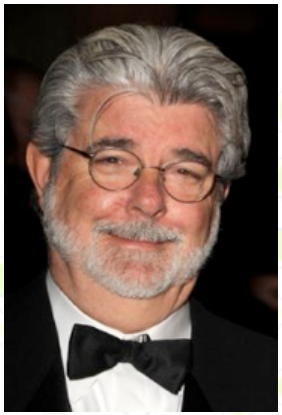
…is to name things,

making it possible to refer to them.

Name ambiguity: *George*

Many things are named George



What is an identifier:

"*Each identifier refers to **one** and only one thing*" (Coyle 2006).

"*An **association** between a string and a thing*" (Kunze 2003).

"*A **stated association** between a symbol and a thing; that the symbol may be used to **unambiguously** refer to the thing within a given **context***" (Campbell 2007).

D
HF CW 282

Identify the *things* that you care about

- The specimen itself (the physical entity)
- Image of the specimen
- Description of the specimen
- Location where the specimen was captured
- The occurrence event when the specimen was observed or captured
- …

Record-level Terms
dcterms:type | dcterms:modified | dcterms:language | dcterms:rights | dcterms:rightsHolder | dcterms:accessRights | dcterms:bibliographicCitation | dcterms:references | **institutionID** | **collectionID** | **datasetID** | **institutionCode** | **collectionCode** | **datasetName** | ownerInstitutionCode | basisOfRecord | informationWithheld | dataGeneralizations | dynamicProperties

Occurrence
occurrenceID | **catalogNumber** | occurrenceRemarks | **recordNumber** | recordedBy | **individualID** | individualCount | sex | lifeStage | reproductiveCondition | behavior | establishmentMeans | occurrenceStatus | preparations | disposition | otherCatalogNumbers | previousIdentifications | associatedMedia | associatedReferences | associatedOccurrences | associatedSequences | associatedTaxa

MaterialSample
materialSampleID

Event
eventID | samplingProtocol | samplingEffort | eventDate | eventTime | startDayOfYear | endDayOfYear | year | month | day | verbatimEventDate | habitat | **fieldNumber** | fieldNotes | eventRemarks

dcterms:Location
locationID | **higherGeographyID** | **higherGeography** | continent | waterBody | islandGroup | island | country | countryCode | stateProvince | county | municipality | **locality** | verbatimLocality | verbatimElevation | minimumElevationInMeters | maximumElevationInMeters | verbatimDepth | minimumDepthInMeters | maximumDepthInMeters | minimumDistanceAboveSurfaceInMeters | maximumDistanceAboveSurfaceInMeters | locationAccordingTo | locationRemarks | verbatimCoordinates | verbatimLatitude | verbatimLongitude | verbatimCoordinateSystem | verbatimSRS | decimalLatitude | decimalLongitude | geodeticDatum | coordinateUncertaintyInMeters | coordinatePrecision | pointRadiusSpatialFit | footprintWKT | footprintSRS | footprintSpatialFit | georeferencedBy | georeferencedDate | georeferenceProtocol | georeferenceSources | georeferenceVerificationStatus | georeferenceRemarks

GeologicalContext
geologicalContextID | earliestEonOrLowestEonothem | latestEonOrHighestEonothem | earliestEraOrLowestErathem | latestEraOrHighestErathem | earliestPeriodOrLowestSystem | latestPeriodOrHighestSystem | earliestEpochOrLowestSeries | latestEpochOrHighestSeries | earliestAgeOrLowestStage | latestAgeOrHighestStage | lowestBiostratigraphicZone | highestBiostratigraphicZone | lithostratigraphicTerms | group | formation | member | bed

Identification
identificationID | identifiedBy | dateIdentified | identificationReferences | identificationVerificationStatus | identificationRemarks | identificationQualifier | typeStatus

Taxon
taxonID | **scientificNameID** | **acceptedNameUsageID** | **parentNameUsageID** | **originalNameUsageID** | **nameAccordingToID** | **namePublishedInID** | **taxonConceptID** | scientificName | acceptedNameUsage | parentNameUsage | originalNameUsage | nameAccordingTo | namePublishedIn | namePublishedInYear | higherClassification | kingdom | phylum | class | order | family | genus | subgenus | specificEpithet | infraspecificEpithet | taxonRank | verbatimTaxonRank | scientificNameAuthorship | vernacularName | nomenclaturalCode | taxonomicStatus | nomenclaturalStatus | taxonRemarks

ResourceRelationship (Auxiliary Terms)
resourceRelationshipID | **resourceID** | **relatedResourceID** | relationshipOfResource | relationshipAccordingTo | relationshipEstablishedDate | relationshipRemarks

MeasurementOrFact (Auxiliary Terms)
measurementID | measurementType | measurementValue | measurementAccuracy | measurementUnit | measurementDeterminedDate | measurementDeterminedBy | measurementMethod | measurementRemarks

Darwin Core
identifier terms

Term name:	occurrenceID
Identifier:	http://rs.tdwg.org/dwc/terms/occurrenceID
Class:	http://rs.tdwg.org/dwc/terms/Occurrence
Definition:	An identifier for the Occurrence (as opposed to a particular digital record of the occurrence). In the absence of a **persistent global unique identifier**, construct one from a combination of identifiers in the record that will most closely **make the occurrenceID globally unique**.
Comment:	For a specimen in the absence of a bona fide global unique identifier, for example, use the form: "**urn:catalog:[institutionCode]:[collectionCode]:[catalogNumber]**". Examples: "urn:lsid:nhm.ku.edu:Herps:32", "urn:catalog:FMNH:Mammal:145732". For discussion see http://code.google.com/p/darwincore/wiki/Occurrence

Reuse existing identifiers

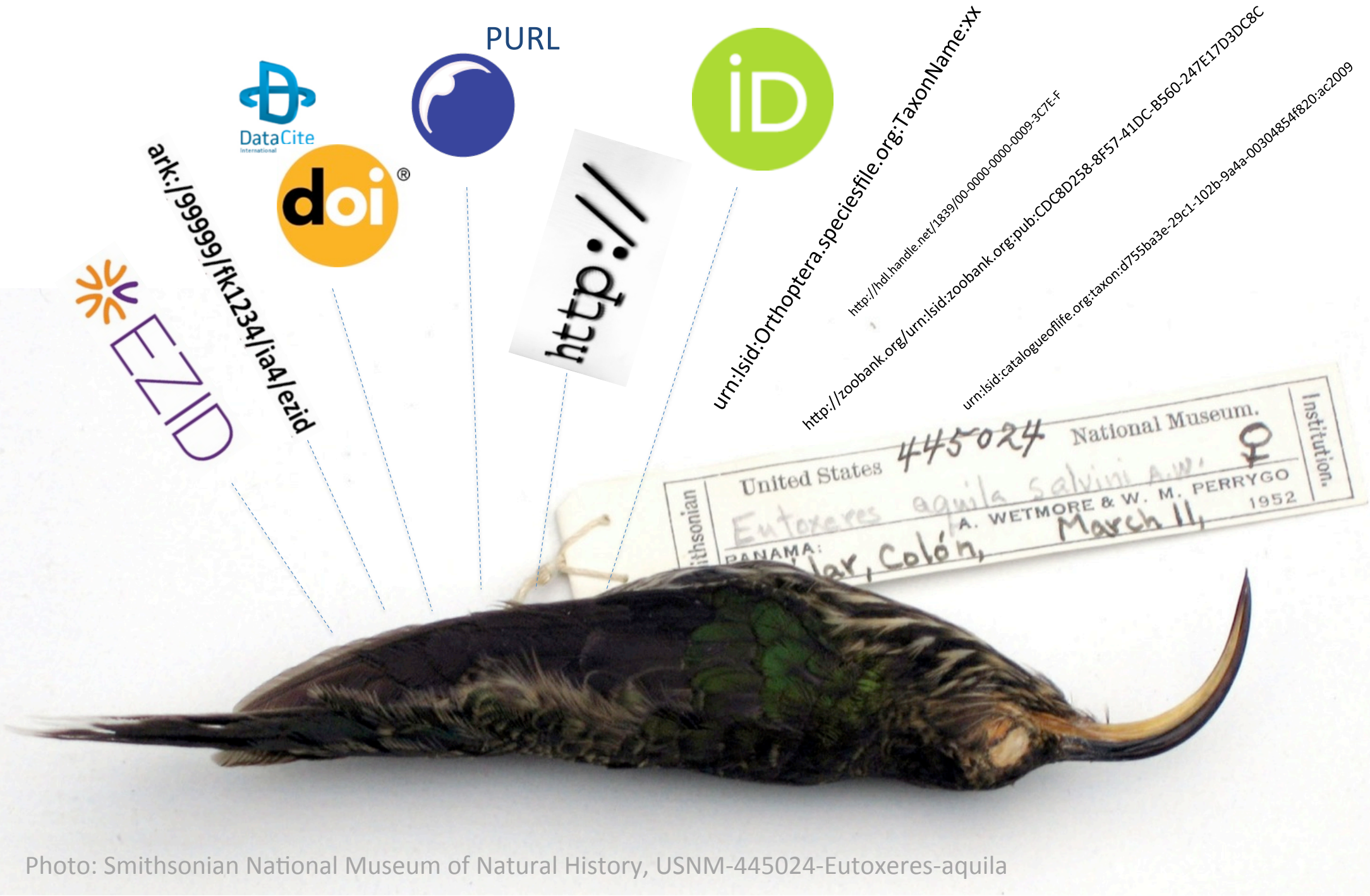


Photo: Smithsonian National Museum of Natural History, USNM-445024-Eutoxeres-aquila

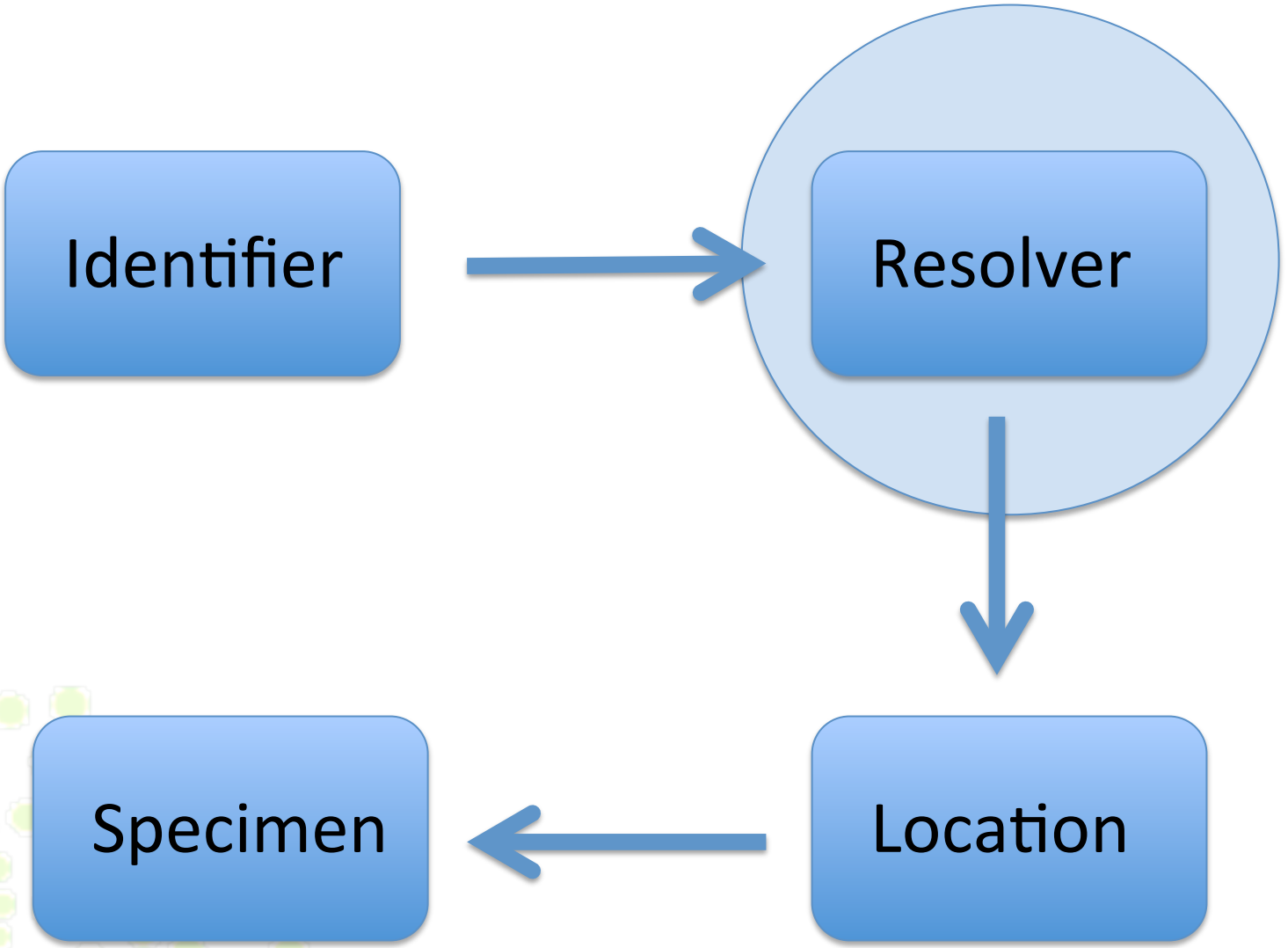
http://purl.org/nhmuio/id/41d9cbb4-4590-4265-8079-ca44d46d27c3

Reuse identifiers

Illustration by Miroslav Šašek (1963)

UNIVERSALLY UNIQUE IDENTIFIER (UUID)

- A UUID is a 16-octet (128-bit) 36-chars number.
- Example: C37E3F9B-BCAF-4479-8EB7-3346A2DB2373
- The probability of one duplicate would be about 50% if every person on earth create 600 million UUIDs.
- Allows for **easy generation at source** in a distributed network.



The resolver is a system to resolve locations from identifiers, enabling retrieval even when the location changes.

http – PURL – UUID

http://purl.org/nhmuio/id/41d9cbb4-4590-4265-8079-ca44d46d27c3

O-L-000014

html, csv, txt, n3/turtle, json-ld

Including machine readable formats

ID:	41d9cbb4-4590-4265-8079-ca44d46d27c3
Occurrence ID:	http://purl.org/nhmuio/id/41d9cbb4-4590-4265-8079-ca44d46d27c3
Institution code:	O
Collection code:	L
Catalogue number:	14
Basis of record:	Specimen

Event

Recorded by:	Tapper, R.
Year:	1971
Month:	6
Day:	23

Taxon

Scientific Name:	Anaptychia ethiopica
Kingdom:	Fungi
Phylum:	Ascomycota
Class:	Ascomycetes
Order:	Lecanorales
Family:	Physciaceae
Genus:	Anaptychia
Type Status:	Isotype

Location

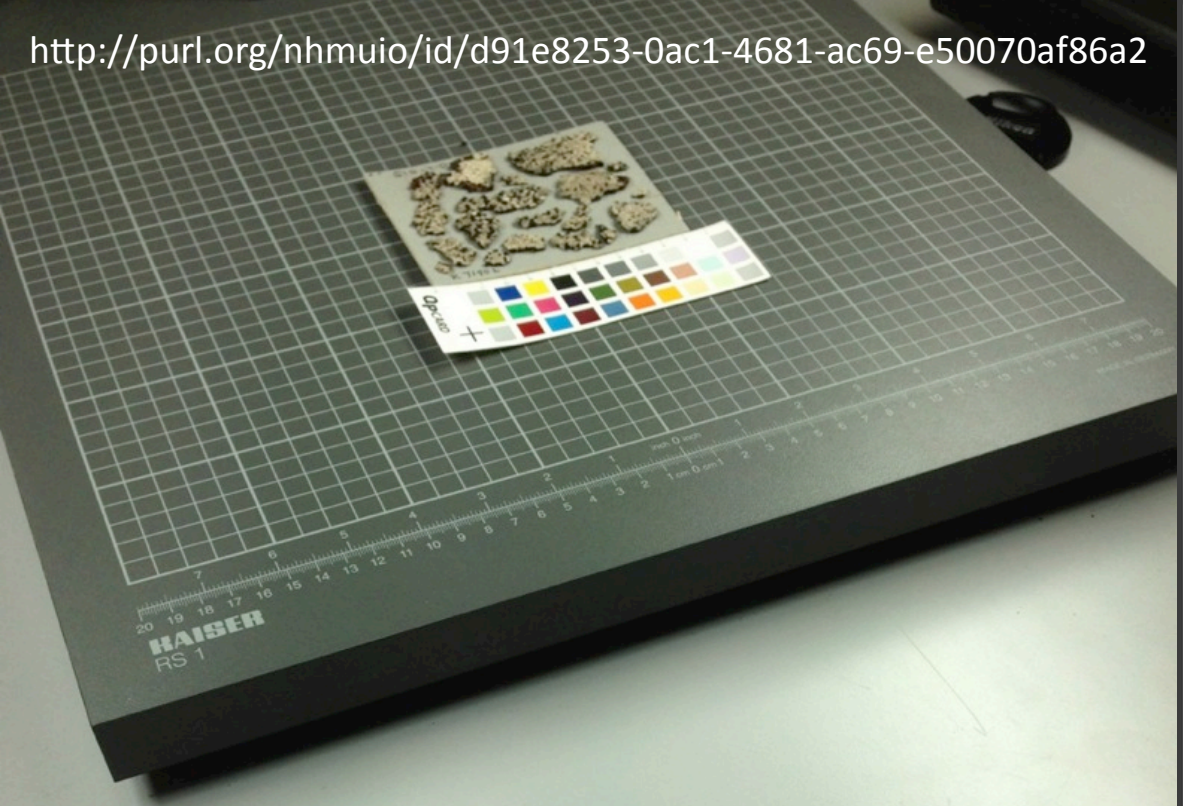
Continent:	Africa
Country:	Ethiopia
State/Province:	Simen
Locality:	Buahit

Images

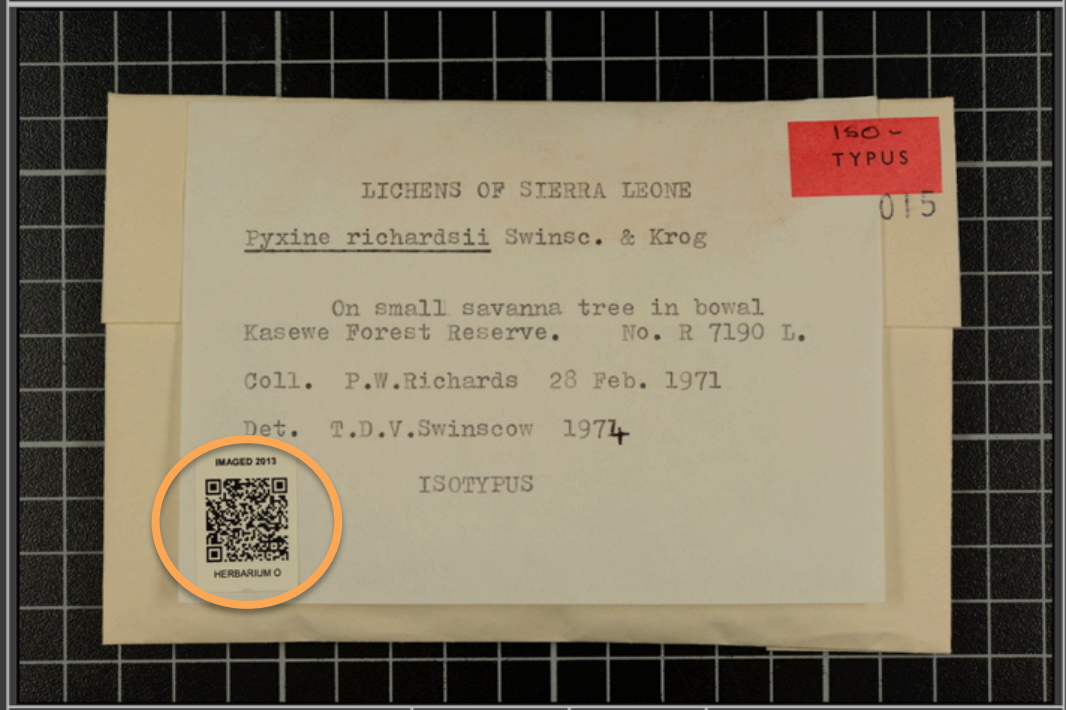
```
@prefix dc: <http://purl.org/dc/elements/1.1/>.
@prefix dwc: <http://rs.tdwg.org/dwc/terms/>.
<http://purl.org/nhmuio/id/41d9cbb4-4590-4265-8079-ca44d46d27c3>
    dc:identifier "41d9cbb4-4590-4265-8079-ca44d46d27c3";
    dwc:occurrenceID "http://purl.org/nhmuio/id/41d9cbb4-4590-4265-8079-ca44d46d27c3";
    dwc:institutionCode "O";
    dwc:collectionCode "L";
    dwc:catalogNumber "14";
    dwc:basisOfRecord "Specimen";
    dwc:recordedBy "Tapper, R.";
    dwc:year "1971";
    dwc:month "6";
    dwc:day "23";
    dwc:scientificName "Anaptychia ethiopica";
    dwc:kingdom "Fungi";
    dwc:phylum "Ascomycota";
    dwc:class "Ascomycetes";
    dwc:order "Lecanorales";
    dwc:family "Physciaceae";
    dwc:genus "Anaptychia";
    dwc:typeStatus "Isotype";
    dwc:continent "Africa";
    dwc:country "Ethiopia";
    dwc:stateProvince "Simen";
    dwc:locality "Buahit".
```

Catalog number: O-L-000014
http://purl.org/nhmuio/id/41d9cbb4-4590-4265-8079-ca44d46d27c3
human-friendly
machine-friendly
QPCARD

http://purl.org/nhmuio/id/d91e8253-0ac1-4681-ac69-e50070af86a2



Images of Lichen Types in Herbarium O (Oslo)



***Pyxine richardsii* Swinscow & Krog** | ISOTYPE | O-L-000015 | Click on image for full size (36 MPx)

Protolog: Swinscow,TDV/Krog,H, *Norw. J. Bot.* **22**: 127 (1975)

Locality: SIERRA LEONE: bowal Kasewe Forest Reserve, 1971.02.28, Richards, P.W. R 7190 L

Currently accepted name: *Pyxine richardsii* Swinscow & Krog

Efficient workflow routines

Digitarium

http://gbif.no/dugnad/

HERBARIUM O

Herb. Univers. Osloensis

Heterodermia diademata (Tayl.) Awas.

KENYA
Rift Valley Prov. Uasin Gishu Distr.
5 km NW of Timboroa summit, on
moist brush by lake, and fence posts.
0-04 N 35-32 E 2650 m

2/1973 2K19/138 Hildur Krog

TLC (..../..):

zeorin

atranorin

Hildur Krog 19

O-L-185347
Sign up or Sign in!
(4 transcriptions)
Scientific name: ɜrmia diademata (Tayl.) Awas.
Country: Kenya
Province: RiftValey Prov.
District: Uasin Gishu Distr.
Locality: 5 km NW of Timbora summit, on moist brush by lake, and fence posts.
Habitat: moist brush by lake
Position: 0-04n 35-32e
Show map...
Elevation: 2650 m
Collector: Hildur Krog
Collector no: 2K19/138
Date: Day 2 1973
Skip this record... Next record...
Show help...

Data paper

A peer-reviewed open-access journal

Biodiversity Data Journal

Making your data count!

- *Peer review* option for biodiversity data sets.
- Authors get scientific **credit** for data publication.
- Meeting concerns over **data quality**.
- Meeting concerns over **data citation** mechanism.
- *Towards* → Each data set published through GBIF accompanied by a **data paper**…??

Resolving the publishing bottleneck for biodiversity

Science is a combination of gathering facts and making theories; neither can progress on its own. In the history of science, the laborious accumulation of facts is the dominant mode, not a novelty.

Peter Norvig

Why publish your data

- Citable publication
- Establish scientific priority
- Increase collaboration
- Link data to bigger network
- Re-use and multiply effect
- Respond to funding requirements

http://biodiversitydatajournal.com/

PENSOFT

ViBRANT
Virtual Biodiversity

SEVENTH FRAMEWORK PROGRAMME

Smith V, Georgiev T, Stoev P, Biserkov J, Miller J, Livermore L, Baker E, Mietchen D, Couvreur T, Mueller G, Dikow T, Helgen K, Frank J, Agosti D, Roberts D, Penev L (2013) Beyond dead trees: integrating the scientific process in the Biodiversity Data Journal. Biodiversity Data Journal 1: e995. DOI: 10.3897/BDJ.1.e995

Data Papers

Ecology, 90(9), 2009, p. 2648
© 2009 by the Ecological Society of America

PanTHERIA: a species-level database of life history, ecology, and geography of extant and recently extinct mammals

Ecological Archives E090-184

Kate E. Jones,[1,6] Jon Bielby,[1] Marcel Cardillo,[2,7] Susanne A. Fritz,[2] Justin O'Dell,[3] C. David L. Orme,[2] Kamran Safi,[1] Wes Sechrest,[3] Elizabeth H. Boakes,[1,8] Chris Carbone,[1] Christina Connolly,[1] Michael J. Cutts,[2] Janine K. Foster,[2] Richard Grenyer,[2,8] Michael Habib,[3,9] Christopher A. Plaster,[2,10] Samantha A. Price,[3,11] Elizabeth A. Rigby,[3,12] Janna Rist,[1] Amber Teacher,[1] Olaf R. P. Bininda-Emonds,[4] John L. Gittleman,[3,13] Georgina M. Mace,[1,8] and Andy Purvis[2,5]

ZooKeys 150: 407–417 (2011)
doi: 10.3897/zookeys.150.2002
www.zookeys.org

DATA PAPER

ZooKeys
A peer-reviewed open-access journal
Launched to accelerate biodiversity research

Literature based species occurrence data of birds of northeast India

Sujit Narwade[1], Mohit Kalra[1], Rajkumar Jagdish[1], Divya Varier[1], Sagar Satpute[1], Noor Khan[1], Gautam Talukdar[2], V. B. Mathur[2], Karthikeyan Vasudevan[2], Dinesh Singh Pundir[2], Vishwas Chavan[3], Rajesh Sood[3]

1 *Bombay Natural History Society (BNHS), Shaheed Bhagatsingh Road, 400001, Mumbai, India* **2** *Wildlife Institute of India (WII), Post Box No 18, Chandrabani, 248001, Dehradun, India* **3** *Global Biodiversity Information Facility (GBIF), Universitetsparken 15, DK 2100, Copenhagen, Denmark*

Corresponding author: *Sujit Narwade* (bnhs@envis.nic.in)

Academic editor: *L. Penev* | Received 2 September 2011 | Accepted 24 November 2011 | Published 28 November 2011

Citation: Narwade S, Kalra M, Jagdish R, Varier D, Satpute S, Khan N, Talukdar G, Mathur VB, Vasudevan K, Pundir DS, Chavan V, Sood R (2011) Literature based species occurrence data
(Eds) e-Infrastructures for data publishing in biodiversity science. ZooK

Abstract

The northeast region of India is one of the world's most sig
richest bird areas in India, it is an important route for mig
bird species. This paper describes a literature-based dataset c
India. The occurrence records documented in the dataset are
viz.: Arunachal Pradesh, Assam, Bihar, Manipur, Meghalaya,
Pradesh and West Bengal. The geospatial scope of the dataset
and 78 to 94 degree East longitude, and it comprises over 2
been collated from scholarly literature published between1915
Bombay Natural History Society (JBNHS). The temporal scale
recorded between 1909 and 2007. The dataset has been devel
ments in the database are scientific name, taxonomic classifica
ing geo-coordinate precision, data collector, basis of record a
temporal and geospatial quality of more than 50% of the data
Where possible, data records are annotated with geospatial c
This dataset is being constantly updated with the addition of
of documented occurrences. The dataset can be used in spec
ies. It is planned to expand the scope of the dataset to collate
peninsula.

Copyright *Sujit Narwade et al.* This is an open access article distributed under the t
permits unrestricted use, distribution, and reproduction in any medium, provided th

PhytoKeys 12: 59–67 (2012)
doi: 10.3897/phytokeys.12.2849
www.phytokeys.com

DATA PAPER

PhytoKeys
A peer-reviewed open-access journal
Launched to accelerate biodiversity research

Florabank1: a grid-based database on vascular plant distribution in the northern part of Belgium (Flanders and the Brussels Capital region)

Wouter Van Landuyt[1,2], Leo Vanhecke[3], Dimitri Brosens[1]

1 *Research Institute for Nature and Forest, Kliniekstraat 25, 1070, Brussels, Belgium* **2** *Flo.Wer, Bouchout Domain, Nieuwelaan 38, 1070, Meise, Belgium* **3** *NBGB (National Botanic Garden of Belgium), Bouchout Domain, Nieuwelaan 38, 1860, Meise, Belgium*

Corresponding author: *Wouter Van Landuyt* (wouter.vanlanduyt@inbo.be)

Academic editor: *Vishwas Chavan* | Received 6 February 2012 | Accepted 15 May 2012 | Published 16 May 2012

Citation: Van Landuyt W, Vanhecke L, Brosens D (2012) Florabank1: a grid-based database on vascular plant distribution in the northern part of Belgium (Flanders and the Brussels Capital region). PhytoKeys 12: 59–67. doi: 10.3897/phytokeys.12.2849

ZooKeys 152: 87–91 (2011)
doi: 10.3897/zookeys.152.2473
www.zookeys.org

DATA PAPER

ZooKeys
A peer-reviewed open-access journal
Launched to accelerate biodiversity research

Project Description: DNA Barcodes of Bird Species in the National Museum of Natural History, Smithsonian Institution, USA

David E. Schindel[1], Mark Y. Stoeckle[2], Chris M. Milensky[3], Michael Trizna[1], Brian K. Schmidt[3], Christina A. Gebhard[3], Gary R. Graves[3,4]

1 *Consortium for the Barcode of Life, MRC-105, National Museum of Natural History, Smithsonian Institution, P. O. Box 37012, Washington, D.C. 20013-7012 USA* **2** *Program for the Human Environment, ology, MRC-116, National Museum of , D.C. 20013-7012 USA* **4** *Center for 2100 Copenhagen, Denmark*

mber 2011 | Published 8 December 2011

ard C, Graves G (2011) Project description:
ithsonian Institution, USA. ZooKeys 152:

ithsonian Institution in Washington,
tissue samples. Of the 1,403 species
previously. This data release increases
records meet the data standard of the
yword BARCODE in GenBank. The
ystems.

History of the Smithsonian In-
NA barcode data records into
of Life Data Systems (BOLD).

the Creative Commons Attribution License, which
l author and source are credited.

PENSOFT

A peer-reviewed open-access journal

Biodiversity Data Journal

Making your data count!

Data paper workshop in Oslo

- GBIF-Norway will organize the first Norwegian data paper writing workshop on 2nd to 3rd December 2014.
- Limited number of participants for each workshop
- You may register your interest, we will organize more data paper writing workshops in 2015.

- Registration: gbif-drift@nhm.uio.no

Publish your data!

CC SOME RIGHTS RESERVED Photo by: Niklas Bildhauer

Publish and ***archive*** your species occurrence data

- You can always simply publish your species occurrence data by sending an email to gbif-drift@nhm.uio.no
- Our helpdesk will assist with data publishing!

- **Citizen Science**, Artsobservasjoner, iNaturalist, Anymals + Plants, …

- You can also use a **data archiving** platform such as B2SHARE (EUDAT) or NorStore (Norwegian research data).

Metadata requirements

- Dataset description
- Project description
- People and Organizations (including roles)
- Coverage
  - Taxonomic coverage
  - Geographic coverage
  - Temporal coverage
- Methods
- Intellectual property rights, licensing
- Keywords

free and open access to biodiversity data

Darwin Core Archive Spreadsheet Processor

BETA

Directions:

1. Review the available spreadsheet templates
2. Download and complete the templates according to the user guidelines
3. Click the "Choose File" button on the right to upload the completed spreadsheet or
4. Email it to spreadsheets@tools.gbif.org
5. Receive a validated Darwin Core Archive file or EML metadata document.
6. To publish, put the Darwin Core Archive file and EML metadata document online, with a stable URL.
7. Follow the GBIF data registration guidelines to register the data files with GBIFS.

Upload File:
Browse... No file selected.

Process File

or

mail to:

spreadsheets@tools.gbif.org

Note: The processor does NOT publish a datafile to GBIF. It provides a publication-ready file.

Available Spreadsheet Templates – The processor currently only supports a set of pre-configured spreadsheet 'templates'. Each is available in the older XLS format and the new XLSX format, which supports more than 64,000 rows.

http://tools.gbif.org/spreadsheet-processor/

The following templates are available:

Metadata - Use this template to describe a database or other data resource. Processor output is an Ecological Metadata Language Document that conforms to a GBIF metadata profile. [XLSX format]

Species Occurrence - Use this template to record or store basic species collections or observational data. [XLSX format]

Species Checklists – These templates provide different methods for recording and storing simple annotated species checklists. The different versions offer different methods for recording classification information.

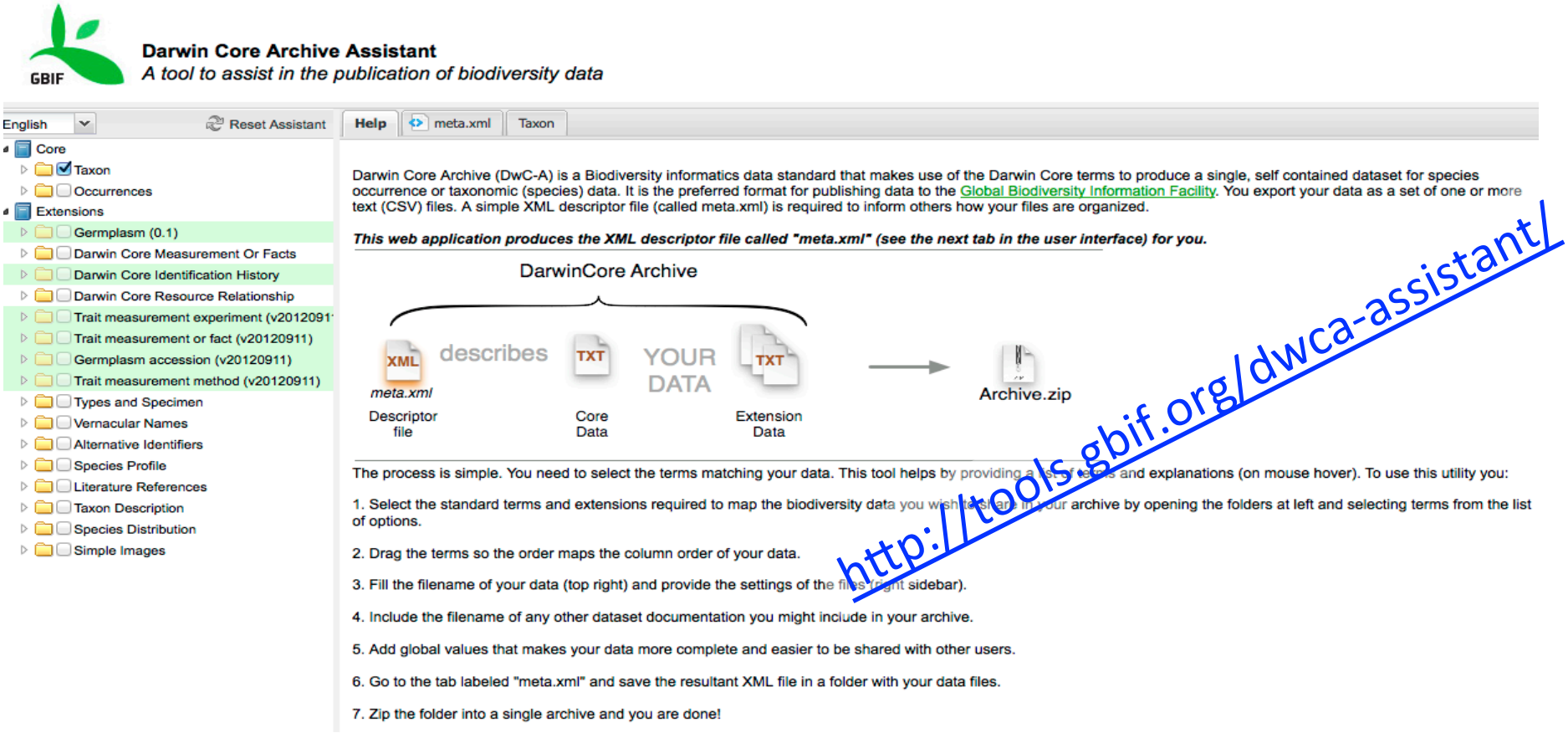
Checklist 1 - Supports a 'normalised' classification where the classification is stored in two spreadsheet columns: one stores the ID of the taxon and another stores the ID of the parent taxon. [XLSX format]

Checklist 2 - Classification in columns where the user can define the specific higher taxon groups. Useful when using super- or sub- ranks or other ranks outside the core Linnaean ranks. [XLSX format]

Checklist 3 - Classification in columns is limited to the basic Linnaean ranks of Kingdom, Phylum, Class, Order, Family, Genus, etc. [XLSX format]

Darwin Core Archive Assistant (GBIF, 2010)

The Darwin Core Archive Assistant is a web application that presents a simple interface for describing the data elements a data publisher wishes to serve to the GBIF network as basic text files and composes the appropriate XML descriptor file as defined in the Darwin Core Text Guidelines to accompany them. It communicates with the GBIF registry to provide an up-to-date listing of all relevant Darwin Core terms and available extensions and presents these in a simple checklist format.



artsobservasjoner.no

Velkommen til Artsobservasjoner

Artsobservasjoner er en uavhengig felles tjeneste for rapportering av artsfunn. Uavhengig i den forstand at det er rapportøren selv som bestemmer hva som rapporteres og som eier sine rapporterte artsfunn etterpå. Brukerne rapporterer under de forutsetninger som tjenesten bygger på og som er redegjort for i informasjonsteksten; les mer

De rapporterte artsobservasjonene kan fritt brukes av alle; allmennheten, forskere, organisasjoner og myndigheter. Observasjoner av sensitive arter er forbeholdt rapportøren, ansvarlige personer i organisasjonene og Artsdatabanken. Alle funn blir publisert først og kvalitetssikres etterpå av ansvarlige i de respektive foreningene. Mange observasjoner blir korrigert av andre brukere gjennom direkte kommentarer til den som har rapportert.

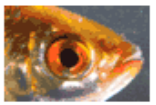
Rapportsystemet for fugler

I samarbeid med Norsk Ornitologisk Forening (NOF). Lansert 5. mai 2008.

Rapportsystemet for pattedyr, amfibier og reptiler

I samarbeid med Norsk Zoologisk Forening (NZF). Lansert 5. mai 2008.

Rapportsystemet for Fisk



I samarbeid med Havforskningsinstituttet (IMR) og Norsk zoologisk forening (NZF). Lansert 17. august 2010.

Rapportsystemet for småkryp

I samarbeid med Norsk Entomologisk Forening (NEF) og Norsk Zoologisk Forening (NZF). Lansert 5. mai 2008.

Rapportsystemet for vekster

I samarbeid med Norsk Botanisk Forening (NBF) og Norges sopp- og nyttevekstforbund (NSNF). Lansert 5. mai 2008.

Rapportsystemet for store rovdyr

I samarbeid med Rovdata. Lansert 30. november 2010.

www.Artsobservasjoner.no

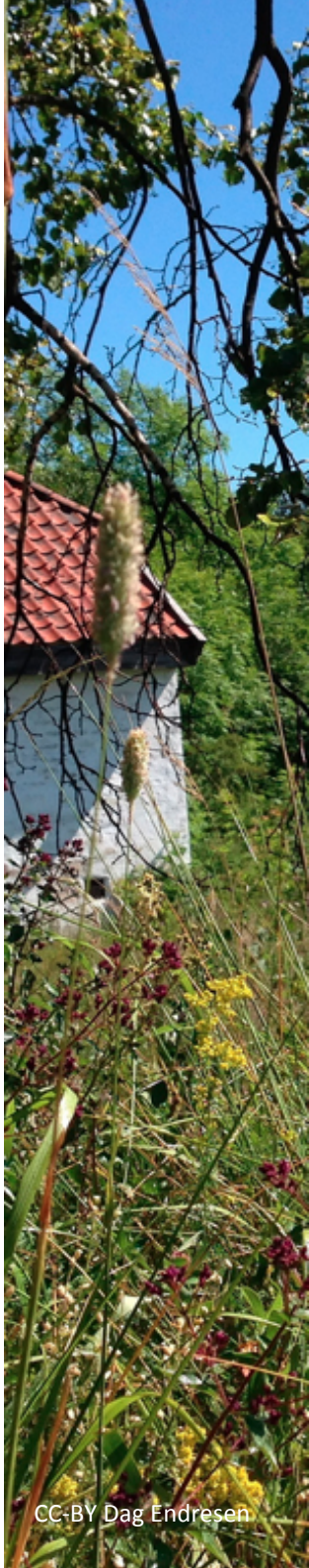
	Antall totalt*	Hittil i dag*
Fugler	10009985	7918
Vekster	1061933	171
Småkryp	235978	17
Virvel	53966	2
Fisk	4983	0
Store rovdyr	1246	0
SUM	11366845	8108

*Tallene oppdateres hvert 15. minutt

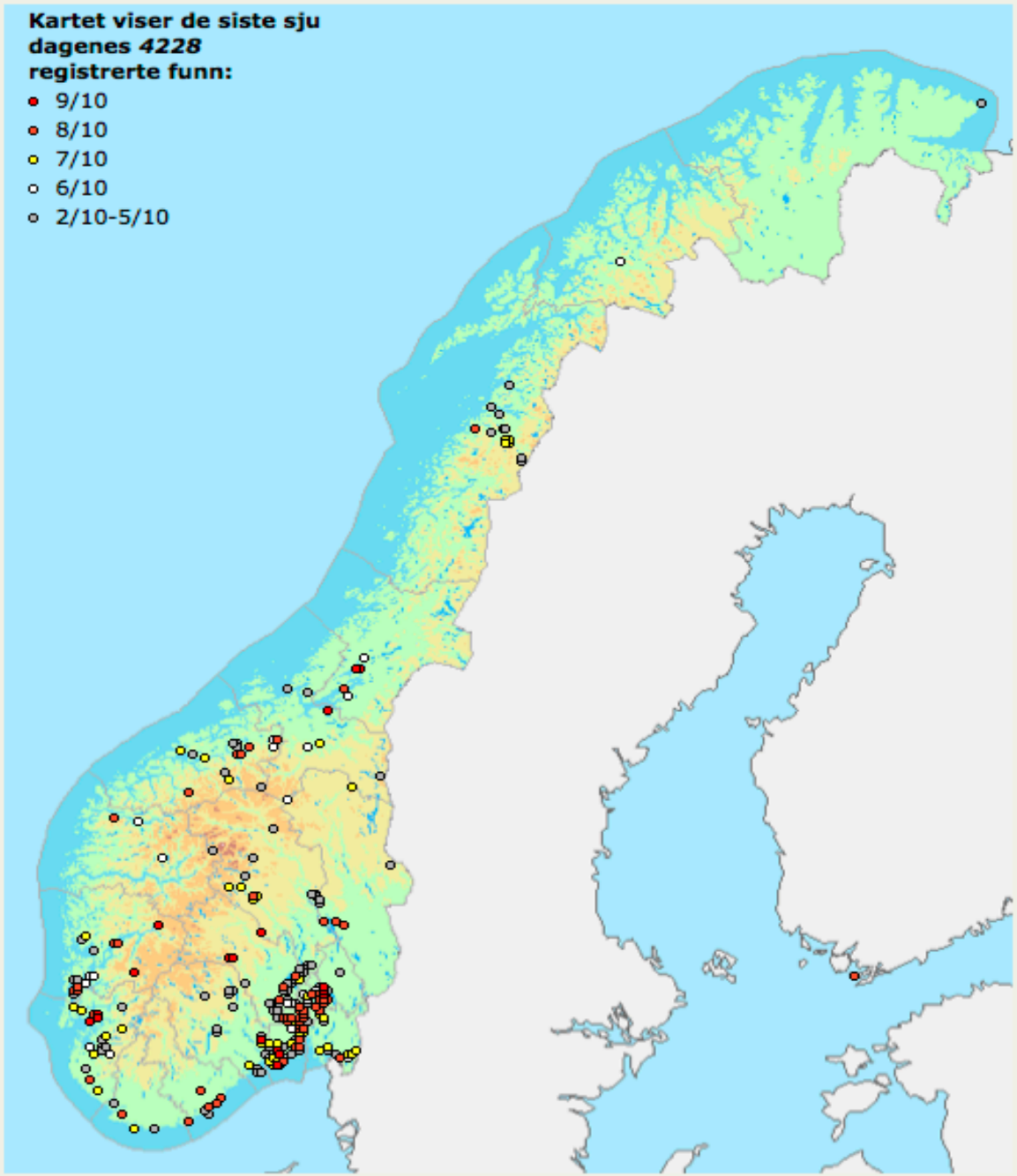
Ønsker du statistikk fra Artsobservasjoner på din hjemmeside klikk her...

ARTSDATABANKEN NEF ROVDATA

http://artsobservasjoner.no/



CC-BY Dag Endresen



Rapporteringssystemet for karplanter, moser, alger, sopp og lav

Rapportsystemet for vekster er utviklet av Artsdatabanken (Norge) i samarbeid med Norsk Botanisk Forening (NBF) og Norges Sopp og Nyttevekstforbund (NSNF). Rapportsystemet er en tilpasning av modulen Rapportsystemet för växter och svampar i www.artportalen.se som er utviklet og driftes av Artdatabanken (Sverige). Den norske Artsdatabanken eier rapportsystemet (applikasjonen og databasen) herunder teknisk drift, rapportørene eier sine egne data men godtar bruken av dataene slik det beskrives under. NBF og NSNF anvender dataene til rapportformål og publikasjoner. Formålet er å gjøre registreringsløsningen tilgjengelig for folk flest og derigjennom øke rapporteringen av funn av disse organismegruppene i Norge, samt å framstille funn i en større sammenheng. Rapporteringen øker ved at observasjonen kan "nettpubliseres" når den har en nyhetsverdi. Kvaliteten øker ved at observasjonene er tilgjengelige for kommentarer og korrigeringer fra andre før en avsluttende publisering i tidskrifter og lignende.
Les mer....

Rapportsystemet drives i samarbeid med:

Norsk Botanisk Forening

Norsk Botanisk Forening er en ideell landsdekkende forening for alle som er interessert i botanikk. Foreningen gir ut det populærvitenskapelige tidsskriftet "Blyttia". En søndag i juni arrangerer foreningen den populære "Villblomstenes dag". NBF har tolv regionale foreninger med sine egne arrangement, både ekskursjoner og foredrag. Enkelte foreninger har egne tidsskrift, og andre driver registreringsprosjekter.
http://www.botaniskforening.no

Norges sopp- og nyttevekstforbund

Norges sopp- og nyttevekstforbund (NSNF) er et landsomfattende forbund av foreninger for folk med interesse for sopp og nyttevekster. Forbundet arrangerer Vintersopptreff hver vinter, og foreningene arrangerer turer, kurs og treff vår, sommer- og høst. Forbundet deltar i en landsomfattende kartlegging av storsopper, og utgir bladet "Sopp og Nyttevekster" samt fagtidsskriftet "Agarica".
http://www.soppognyttevekster.no

ARTPORTALEN

Rapportsystem för växter, djur och svampar

Skapa konto Logga in

Hem | Rapportera | Sök fynd | Listor och Statistik | Bilder | Mina sidor

Startsida | Dagens fynd | Dagens bilder

Vad är nytt?

- ✓ Ett konto för alla arter
- ✓ Bättre kartor
- ✓ Granska fynden före publicering
- ✓ Förbättrad import
- ✓ Sök fynd med ytor
- ✓ Definiera egna parametrar
- ✓ Artportalen blir flerspråkig

Fler nyheter >

Nyheter

2014-10-06

Manualen uppdaterad

Nu är manualen uppdaterad med de senaste funktionerna, däribland landskapskataloger, atlaskarta, floraväkterirapporter och verktyget för att skapa länkar till sökresultat. Läs mer >

2014-10-01

Vill du arbeta med ryggradsdjur i en viktig roll i svensk naturvård?

ArtDatabanken söker en expert med inriktning mot fåglar och andra ryggradsdjur i Uppsala. Läs mer >

2014-09-26

Många förbättringar i ny release

Bland de nya förbättringarna finns bl.a. möjligheten att söka fram personer i topplistorna. Läs mer >

VÅRA SAMARBETSPARTNERS

Sveriges Ornitologiska Förening | Sveriges Entomologiska Förening | SMF Sveriges Mykologiska Förening | Svenska Botaniska Föreningen

+ 1 646 FYND IDAG | 10 660 775 FYND TOTALT

Logga in

Kom igång

Miniguide >

1 Skapa användarkonto

Oavsett om du har ett konto i gamla Artportalen eller är ny användare måste du skapa ett nytt användarkonto för att kunna rapportera.

2 Koppla gamla fynd

Du som har konto i gamla Artportalen måste koppla dina gamla fynd till ditt nya konto för att få åtkomst till dem och för att de ska synas i listor.

3 Rapportera fynd

Ange som minst art, plats och datum och bygg på med valfria uppgifter. Rapportera fynd för fynd i formulär eller många fynd åt gången via Excel-mall. Granska sedan uppgifterna innan du publicerar dem.

4 Sök fynd

Även om du inte har ett konto i Artportalen kan du söka fritt i databasen och filtrera sökningen på ett varierat sätt.

Om Artportalen

Artportalen är en webbplats för den som vill söka efter och rapportera fynd av djur, växter och svampar i Sverige. Artportalen är ett viktigt verktyg i svensk naturvård baserad på folkets observationer ute i naturen.

Mer om Artportalen >

Artportalens grundprinciper

- Dina fynd visas öppet
- Du äger dina egna fynd
- Utvalda fynd kvalitetssäkras
- Känsliga arter skyddas
- Ingen anonym rapportering

Mer om principerna >

Manual / Användarguide

I manualen (pdf) kan du läsa hur du använder de olika funktionerna i Artportalen.

Ladda ned användarguide (9 MB i PDF-format)

Vägledning till rapportering

Vägledningen ger svar på allt från hur man bör namnge fyndplatser till hur man ska göra om man är osäker på vilken art man hittat.

Vägledning till rapportering >

Om Artportalen
Om Artportalen
Användarvillkor
Systemkrav
Kommer i Artportalen

Hjälp
FAQ - vanliga frågor
Vägledning till rapportering
Manual / Användarguide
Ordlista

Kontakt
Kontakt & Support
Releasehistorik

Artportalen drivs i Sverige av ArtDatabanken SLU och i Norge av Artsdatabanken, i samarbete med Artportalsrådet och dess medlemmar.

Finansierad av:
Naturvårdsverket i Sverige och Miljøverndepartementet i Norge.

SLU ArtDatabanken

ARTSDATABANKEN

http://www.artportalen.se/

CC-BY Dag Endresen

Explore!
Your World!

Learn!
About Life!

Record!
Add Observations!

Welcome!

to iNaturalist.org, where you can **record** what you see in nature, **meet** other nature lovers, and **learn** about the natural world.

Learn More »

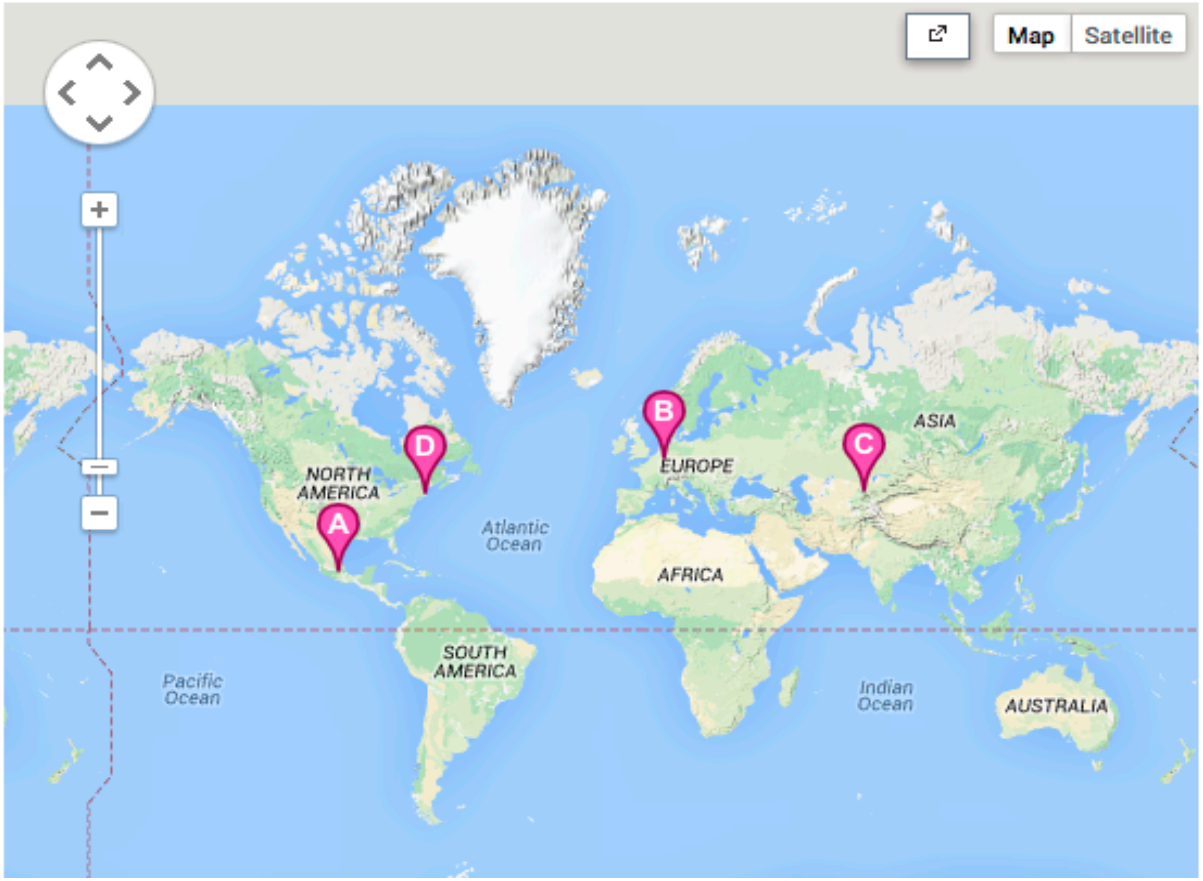
Add observations

Recent additions

A **Perro doméstico**
Observer: anae2233
Date: October 2, 2014
Date added: October 10, 2014
View »

B **Banana Slugs**
Observer: speedy
Date: October 10, 2014
Date added: October 10, 2014
View »

C **plant**
Observer: jnev8168
Date: September 22, 2014
Date added: October 10, 2014
ID Please! View »



Your observations

Home Observations Calendar Lists Journal Identifications Projects Profile

Add observations | Batch Edit | Search

	Photos / Sounds	Species / Taxon Name	Date observed	Place	Date added	
A		Common Hop *Humulus lupulus*	October 3, 2014 04:25 PM CEST	Oslo, Oslo Fylke, Norway (Google, OSM)	October 06, 2014 02:30 PM CEST	2 ID's Research Grade Edit | View »
B		cultivated timothy *Phleum pratense*	June 25, 2014 12:04 PM CEST	Hovedøya, Oslo, Norway (Google, OSM)	September 20, 2014 10:22 PM CEST	1 ID Research Grade Edit | View »
C		Beet *Beta vulgaris*	September 7, 2010 04:28 PM CEST	Alnarp, Skane, Sweden (Google, OSM)	April 09, 2012 10:59 AM CEST	Edit | View »
D		Beet *Beta vulgaris*	June 3, 2005 08:08 AM CEST	Lomma, Skane, Sweden (Google, OSM)	April 09, 2012 10:57 AM CEST	Edit | View »
E		sea kale *Crambe maritima*	September 17, 2010 07:31 PM CEST	Hallavara, Skane, Sweden (Google, OSM)	April 09, 2012 10:53 AM CEST	Edit | View »
F		Azores Blueberry *Vaccinium cylindraceum*	September 11, 2004 12:23 PM CEST	Ribeira, Azores, Portugal (Google, OSM)	April 09, 2012 10:52 AM CEST	2 2 ID's ID! RG Edit | View »

Redo search in map area

Published to GBIF

Google play

Search

+Dag

Apps

Categories

Home

Top Charts

New Releases

My apps

Shop

Games

Editors' Choice

iNaturalist

iNaturalist - October 9, 2014

Education

Install

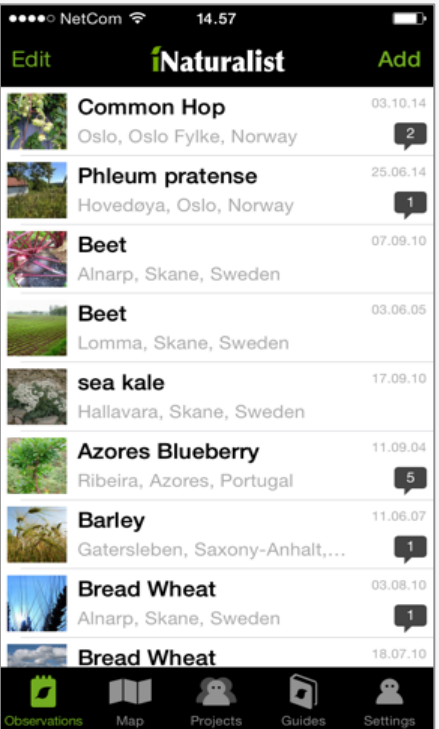
Add to Wishlist

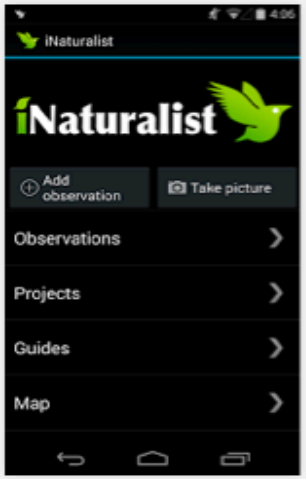
You don't have any devices

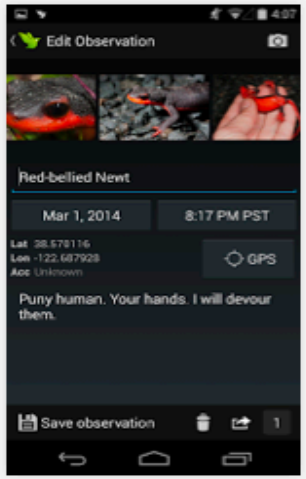
(234)

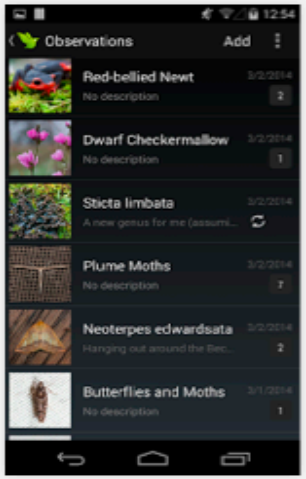
+1 +140 including You

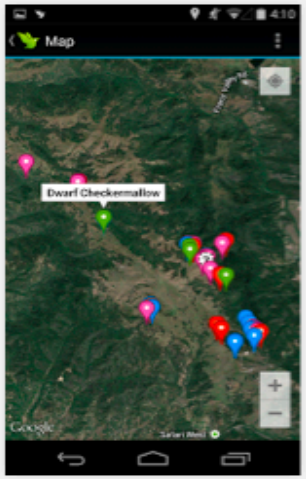
Android & iPhone











Description

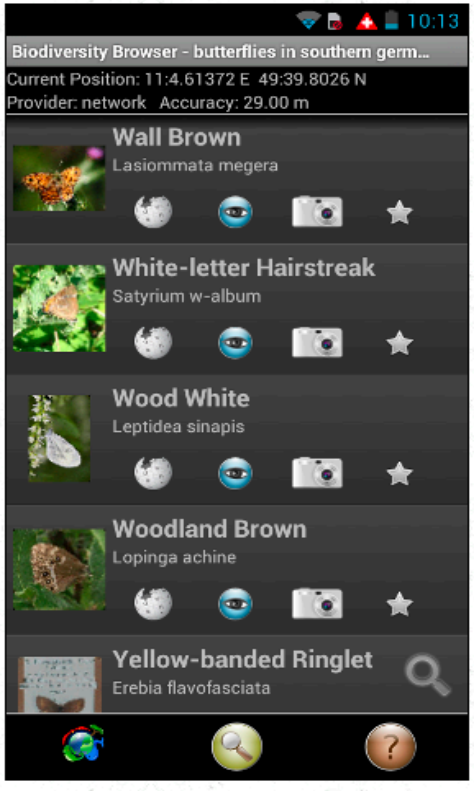
The iNaturalist Android app helps you upload citizen science observations of plants and animals to iNaturalist.org, an online community for naturalists.

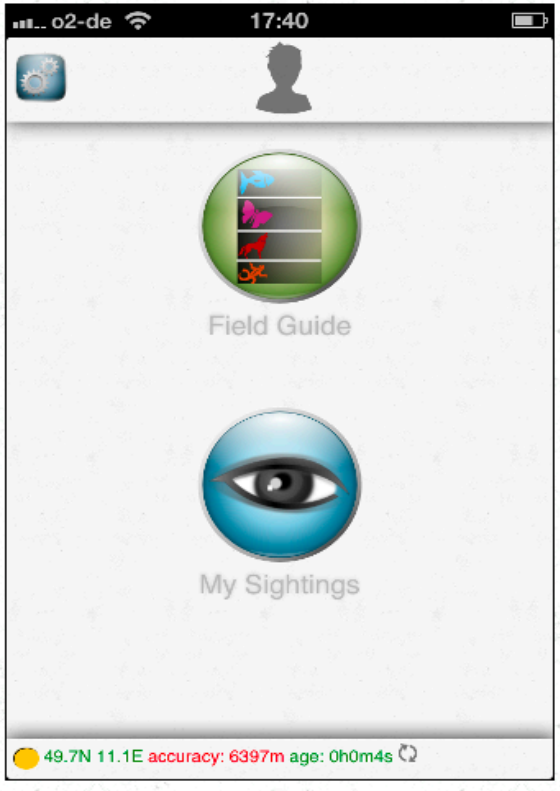
* record observations with photos and GPS locations
* view nearby photos on a map
* keep track of updates from people you follow on iNaturalist.org

For more info, check out http://www.inaturalist.org

Biodiversity in your pocket

App Screenshots





The black screenshots show the android version, the white ones show the iPhone/iPad/WindowsPhone8 versions. Your apple device needs iOS 6.0 or higher.

Username ••••••••• Login quick log in:

anymals +plants

Register today

sightings map community groups guides questions blog

Partner
Taxonomy
Imprint
Archives
Contact

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find & log animals and plants

anymals.org - May 12, 2013

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Install

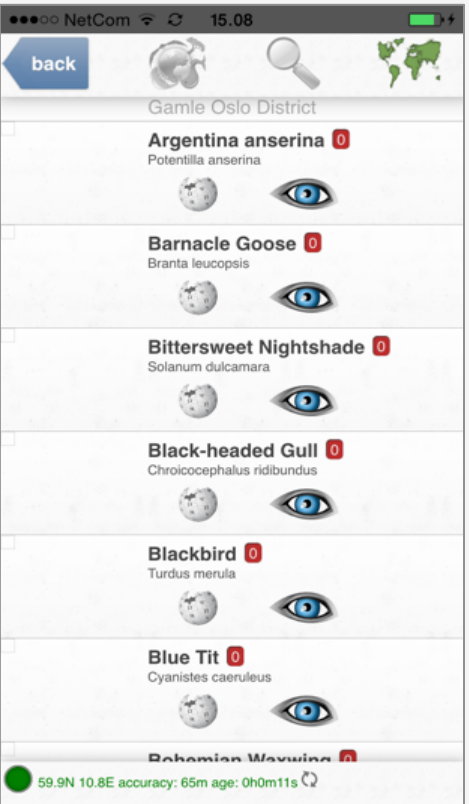
Add to Wishlist

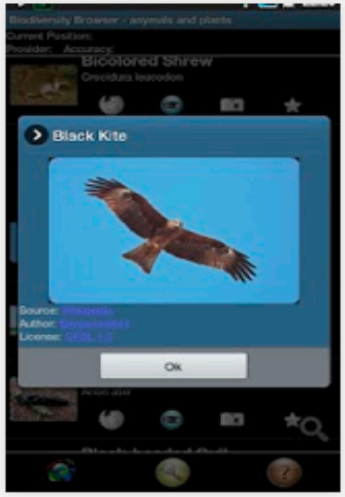
You don't have any devices

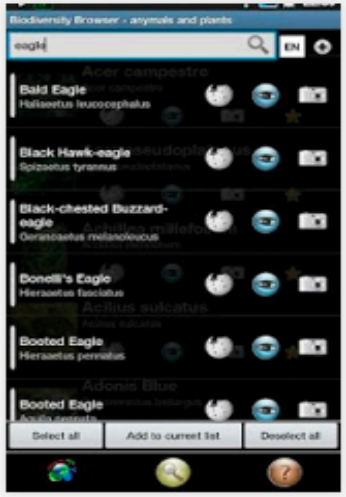
(366)

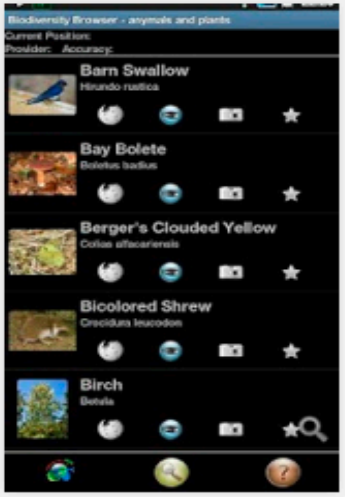
+1 +813 Recommend this on Google

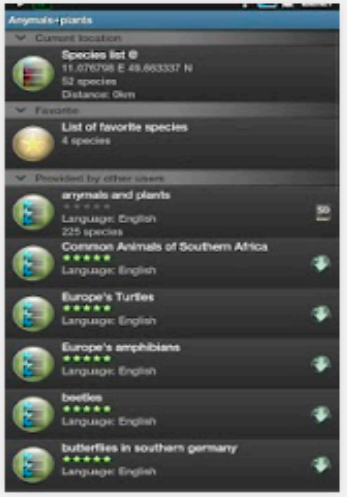
Android & iPhone











Description

New version for Android 4.x - search for 'animals plants open' in the store.
Know about life around you and improve your biodiversity awareness.

Depending on your current position, the anymals+plants app delivers to you which species inhabit your surrounding.
(As sources over 6 million sightings are available!)

EUDAT

B2SHARE
Store and Share Research Data

You are logged in. Username: **DagEndresen**

Step 01

Drag and drop files here

Select files

Start upload

Filename	Size	Status	Remove
dwca-nxl.zip	1.6 mb		

Step 02

Select a domain or project

Generic	Ontology	Hydro-Meteorology	Linguistics	Biomedical Research
EUDAT	euon	DRIHM	CLARIN	

A generic domain to be used when no specific domain is appropriate

GBIF

GBIF.NO

Work in progress…!

You are logged in. Username: **DagEndresen**

A comma separated list of keywords that characterize the content.

Select files

Start upload

Filename	Size	Status	Remove
dwca-nxl.zip	1.6 mb		

Step 02

Select a domain or project

Generic | Ontology | Hydro-Meteorology | Linguistics | Biomedical Research

Step 03

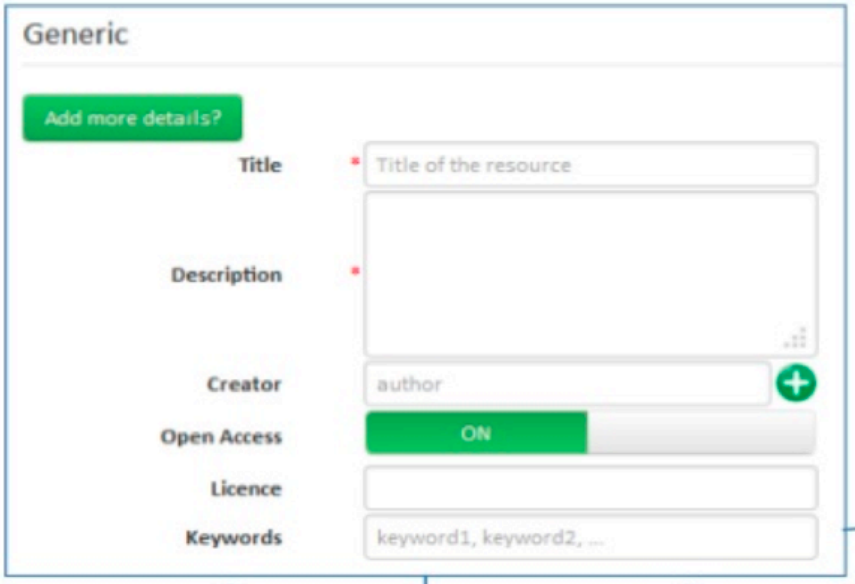
Add basic details

Generic

Add more details?

Title *	Lichen field notes, Oslo (O)
Description *	Norsk Krysslistearkiv for Lav (NXL). Fylkesvise krysslister til feltbruk og sende registreringene inn til vårt arkiv. Data eksporteres videre til NLD, Artskart og GBIF. På utbredelseskartene i NLD markeres krysslisteangivelser med et kryss for å skille dem fra det kontrollerbare herbariematerialet. Arkivet åpnet 25. desember 1997. Noen eldre papirbaserte krysslister er også digitalisert og inkludert.
Creator	Einar Timdal author
Open Access	ON
Licence	:reativecommons.org/publicdomain/zero/1.0/
Keywords	GBIF, Lichens
Contact Email	dag.endresen@nhm.uio.no
Contributors	contributor

How do I deposit data? – step 6



After completing the general information, you should also complete the community specific fields

Each community has different fields to complete

BBMRI

- Study ID
- Study name
- Study Description
- Principal Investigator
- Study design
- Disease
- Categories of data collected
- Planned sampled individuals
- Planned total individuals
- Sex
- Age interval
- Material type

** indicates required field*

euon

- Ontology Domain
- Ontology Language
- Ontology Engineering Tool
- Creation Date
- Modification Date

drihm

- Reference date
- Reference System
- Topic Category
- Responsible Party
- Geographic Location
- Spatial Resolution
- Vertical Extent
- Lineage

Linguistics

- Language Code
- Country/Region
- Resource Type
- Project Name
- Quality

EUDAT

B2FIND
Find Research Data

Faceted Search | Communities | Search datasets...

/ Communities

Communities

EUDAT represents a unique partnership between research communities and data centers.

It brings together data service providers and users who are directly involved with the design of data services.

Search communities...

10 communities found

Order by: Name Ascending

ALEPH

ALEPH was a particle physics experiment installed on the Large...

185 Datasets

B2SHARE
Store and Share Research Data

B2SHARE

EUDAT offers B2SHARE - a user-friendly, secure, robust, reliable and...

135 Datasets

CLARIN

CLARIN

The Common Language Resources and Technology Infrastructure CLARIN project is...

137032 Datasets

DataCite

DataCite

DataCite is a not-for-profit organisation formed in London on 1 December...

174075 Datasets

enes
EUROPEAN NETWORK FOR EARTH SYSTEM MODELLING

ENES

The European Network for Earth System modelling (ENES) provides information...

523 Datasets

GLOBAL BIODIVERSITY INFORMATION FACILITY

GBIF

The Global Biodiversity Information Facility (GBIF) was established by...

11090 Datasets

GBIF Norway

Dag Endresen, Node Manager
Christian Svindseth, Database manager
Einar Timdal, Associate Professor
Fridtjof Mehlum, Research Director
Geir Søli, Associate Professor
Vegar Bakkestuen, Senior Researcher

Wouter Koch, Artsdatabanken
Nils Valland, Artsdatabanken

Thanks for listening!

GBIF Norway

UiO : Natural History Museum
University of Oslo

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Christian Svindseth
christian.svindseth@nhm.uio.no