

The long history of Darwin Core

TDWG Standards Journal Community Conferences About

News 

Darwin Core

Darwin Core is a standard maintained by the [Darwin Core maintenance group](#). It includes a glossary of terms intended to facilitate the sharing of information about biological diversity by providing identifiers, labels, and definitions. Darwin Core is primarily based on taxa, their occurrence in nature as documented by observations, specimens, samples, and related information.

[Darwin Core website](#) 

[Find us on GitHub](#) 

technical specification

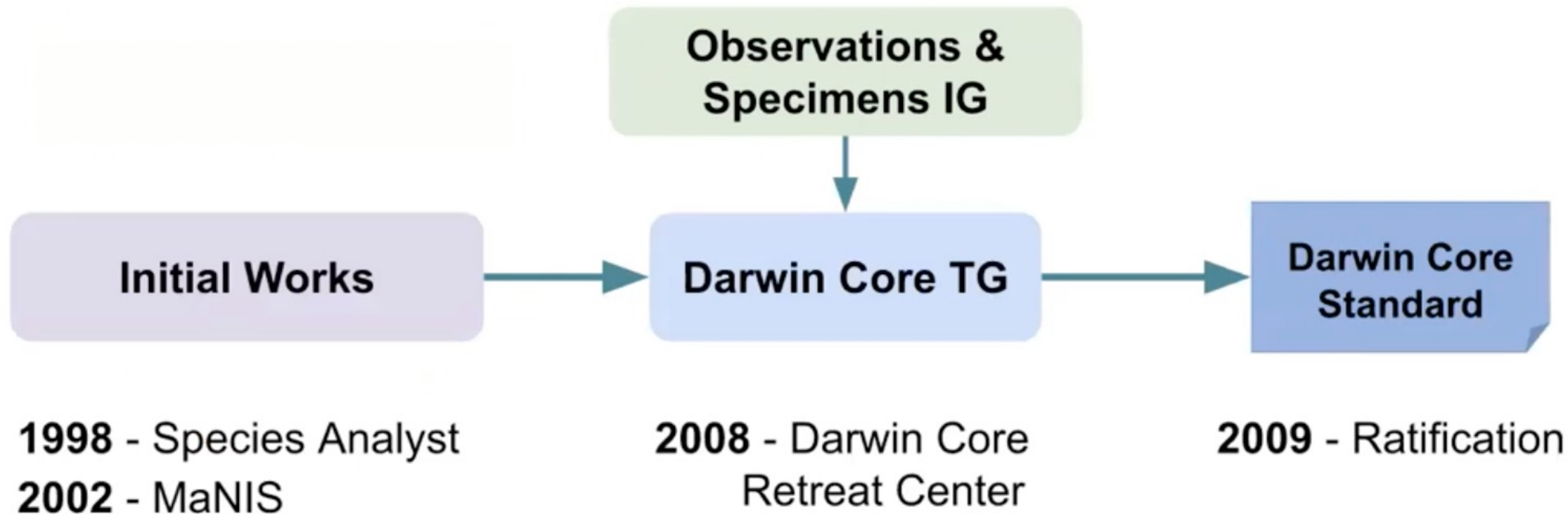
current standard

2009

<https://www.tdwg.org/standards/dwc/>

Most of these slides are coming from the DWC maintenance group

Darwin Core History



Mammal
Networked
Information
System

MaNIS



Biodiversity
Information
Standards
TDWG

Interest & Task Groups

After a standard has been ratified :

- The corresponding Task group disappears
- A maintenance Interest group is created to oversee the standard.

Darwin Core

The Darwin Core Maintenance Group is responsible for maintaining the various components of the Darwin Core Standard, which includes managing suggested changes to the vocabulary, providing usage guidelines and examples, and ensuring the preservation and stability of metadata related to components of the standard. Maintenance Group members have a strong interest in ensuring the stability, interoperability, and evolution of the vocabulary.

interest group

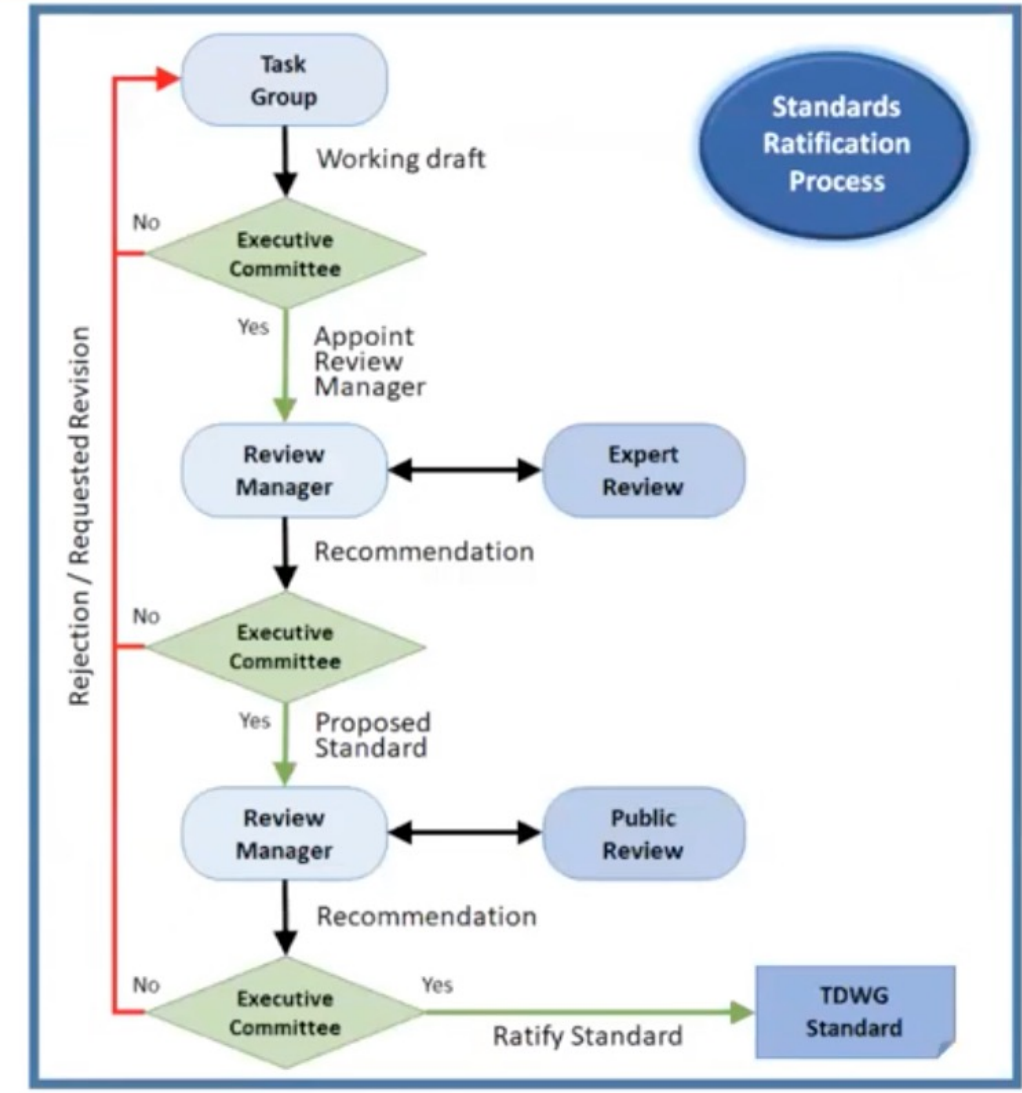
maintenance group

Core members

Convener

John Wiczorek - VertNet

- Peter Desmet - Research Institute for Nature and Forest (INBO)
- Markus Döring - Global Biodiversity Information Facility (GBIF)
- Tim Robertson - Global Biodiversity Information Facility (GBIF)
- Steven Baskauf - Vanderbilt University Heard Libraries
- Paula Zermoglio - VertNet



Darwin Core quick reference guide

This document is intended to be an easy-to-read reference of the currently (as of 2021-07-15) recommended terms maintained as part of the [Darwin Core standard](#) and is maintained by the [Darwin Core Maintenance Group](#).

This page is not part of the standard, but combines the normative term names and definitions with the non-normative comments and examples that are meant to help people to use the terms consistently. Capitalized terms, such as Occurrence, are Darwin Core classes, which are special category terms used to group sets of terms for convenience. Comprehensive metadata for current and obsolete terms in human readable form are found in the document [List of Darwin Core terms](#).

Additional [files with just the current term names](#) and a [file with the full term history](#) can be found in the [Darwin Core repository](#).

For inquiries about how to use Darwin Core, either enter an issue in the [Darwin Core Questions & Answers site](#) or enter an issue in the [alternative form](#), which will have the same effect. See the bottom of this document for how to [cite Darwin Core](#).

Record-level

This category contains terms that are generic in that they might apply to any type of record in a dataset.

type	modified	language	license	rightsHolder	accessRights	bibliographicCitation	references	institutionID	collectionID	datasetID	institutionCode
collectionCode	datasetName	ownerInstitutionCode	basisOfRecord	informationWithheld	dataGeneralizations	dynamicProperties					

type	Property
Identifier	http://purl.org/dc/elements/1.1/type
Definition	The nature or genre of the resource.
Comments	Must be populated with a value from the DCMI type vocabulary (http://dublincore.org/documents/2010/10/11/dcmi-type-vocabulary/).
Examples	<code>StillImage</code> , <code>MovingImage</code> , <code>Sound</code> , <code>PhysicalObject</code> , <code>Event</code> , <code>Text</code>

- Record-level
- Occurrence
- Organism
- MaterialSample
- Event
- Location
- GeologicalContext
- Identification
- Taxon
- MeasurementOrFact
- ResourceRelationship
- UseWithIRI

- LivingSpecimen
- PreservedSpecimen
- FossilSpecimen
- MaterialCitation
- HumanObservation
- MachineObservation

DWC TERMS: COUNTRY AND COUNTRYCODE

country Property	
Identifier	http://rs.tdwg.org/dwc/terms/country
Definition	The name of the country or major administrative unit in which the Location occurs.
Comments	Recommended best practice is to use a controlled vocabulary such as the Getty Thesaurus of Geographic Names.
Examples	Denmark , Colombia , España

countryCode Property	
Identifier	http://rs.tdwg.org/dwc/terms/countryCode
Definition	The standard code for the country in which the Location occurs.
Comments	Recommended best practice is to use an ISO 3166-1-alpha-2 country code.
Examples	AR , SV

MaterialSample

Event

Location

GeologicalContext

Identification

Taxon

MeasurementOrFact

ResourceRelationship

UseWithIRI

LivingSpecimen

PreservedSpecimen



Registered Extensions

The following extensions are registered with GBIF - either for production or development purposes.
The list was last updated at **21-Oct-2021 08:08:50**.
If you think we are missing an important extension please [contact us](#).

Stable Releases

The extensions listed as stable releases are immutable and taken from the GBIF live registry. Any changes needed will result in a new version with a new row type and namespace, leaving the existing one as it was.

GGBN Amplification Extension

Support for DNA Amplifications as an extension for Material Sample core sample data in Darwin Core.
Intended to be a one to many relation to the Material Sample core.
See also http://terms.tdwg.org/wiki/GGBN_Amplification_Vocabulary

Properties 34
Name Amplification
Namespace <http://data.ggbn.org/schemas/ggbn/terms/>
RowType <http://data.ggbn.org/schemas/ggbn/terms/Amplification>
Keywords

GGBN DNA Cloning Extension

Support for DNA Cloning as an extension for Material Sample core sample data in Darwin Core.
Intended to be a one to many relation to the Material Sample core.
See also http://terms.tdwg.org/wiki/GGBN_DNA_Cloning_Vocabulary

Properties 16
Name Amplification
Namespace <http://data.ggbn.org/schemas/ggbn/terms/>
RowType <http://data.ggbn.org/schemas/ggbn/terms/Cloning>
Keywords

DARWIN CORE EXTENSIONS

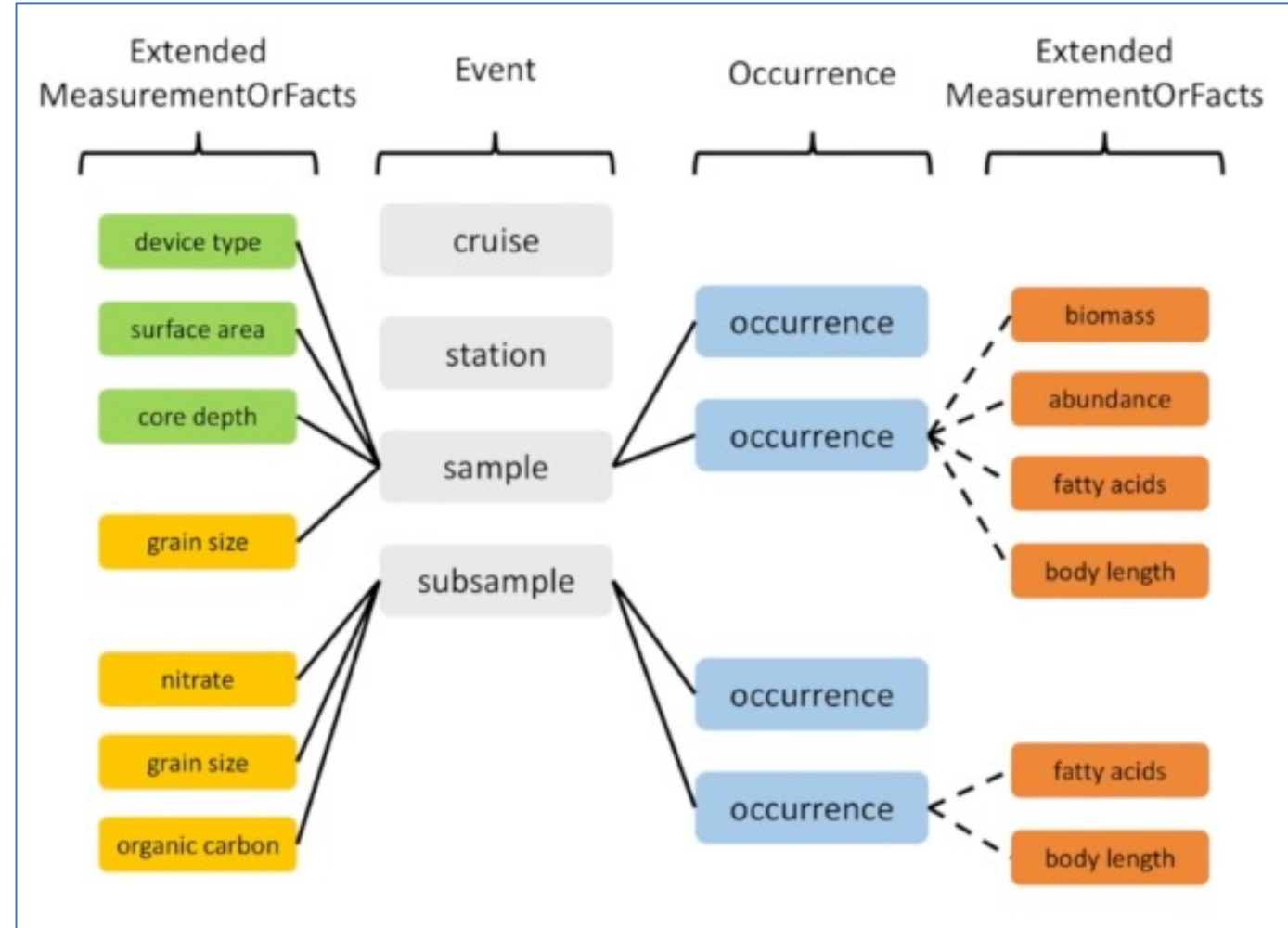
- Audubon Core (Media description)
- Measurements Or Facts
- Identification history
- GGBN

....

Complete list of DWC extensions: <https://tools.gbif.org/dwca-validator/extensions.do>

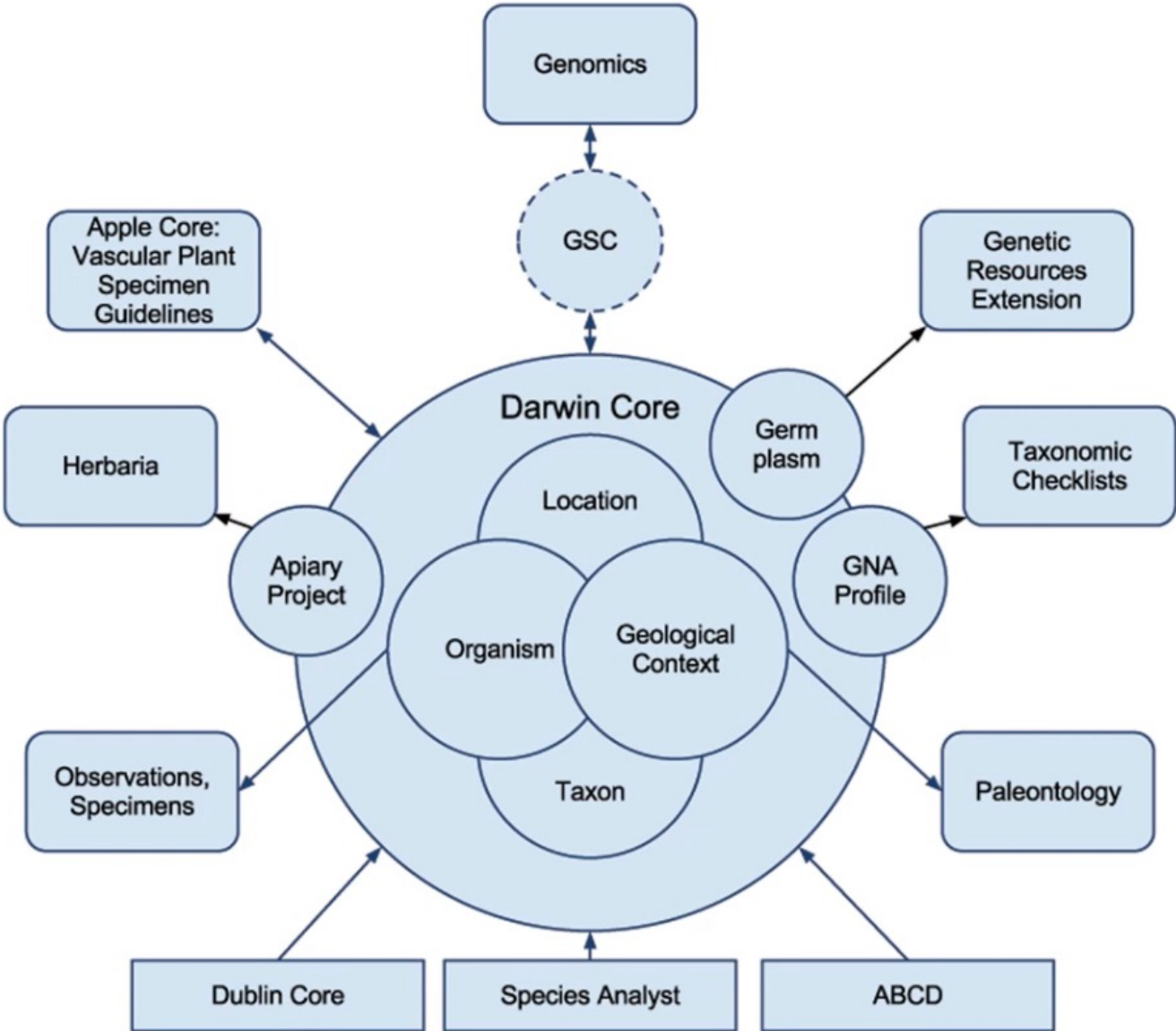
Darwin Core and “env-data”

- Event core for capturing sampling design
- ExtendedMeasurementOrFact extension for all measurements (quantity, biometric, environmental) and sampling facts

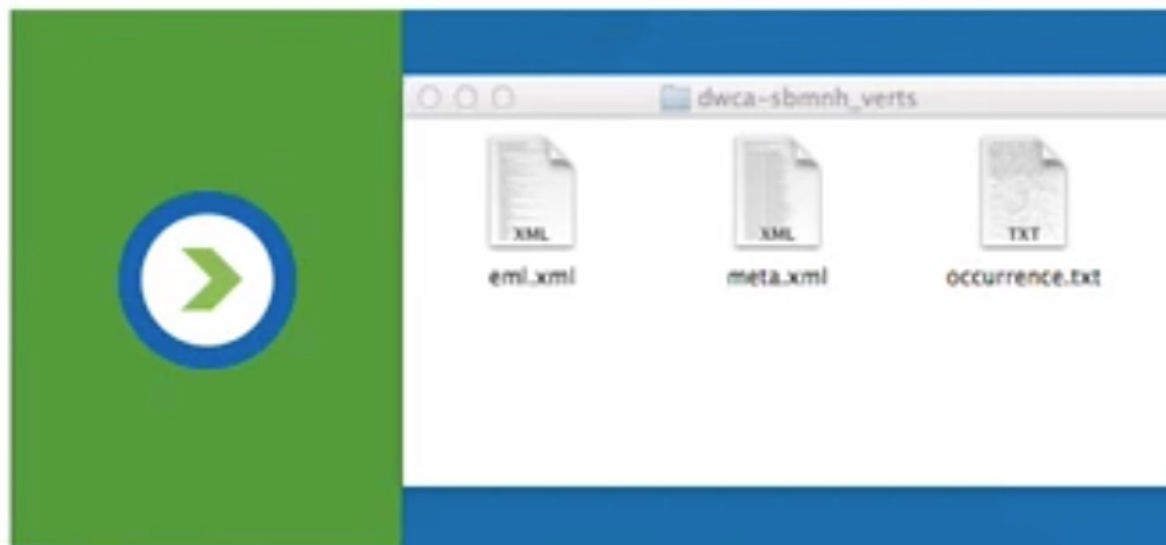
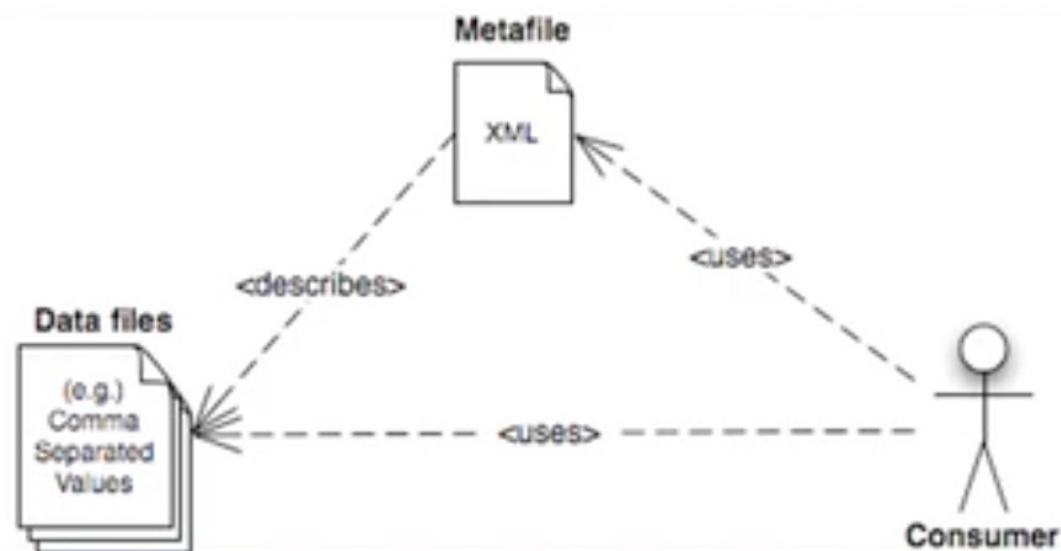


Example: OBIS uses the extended Measurements or Facts extension

Community and standards relationships



DARWIN CORE ARCHIVES



A DwC Archive is an expression of the Darwin Core text guide. It is a compressed file containing a minimum of three files. It is encoded as UTF-8.

Darwin Core Maintenance IG Activities



Darwin Core

Maintenance of
terms

- Review of proposals to change existing terms and to incorporate new terms to the standard

<https://github.com/tdwg/dwc>

tdwg / dwc

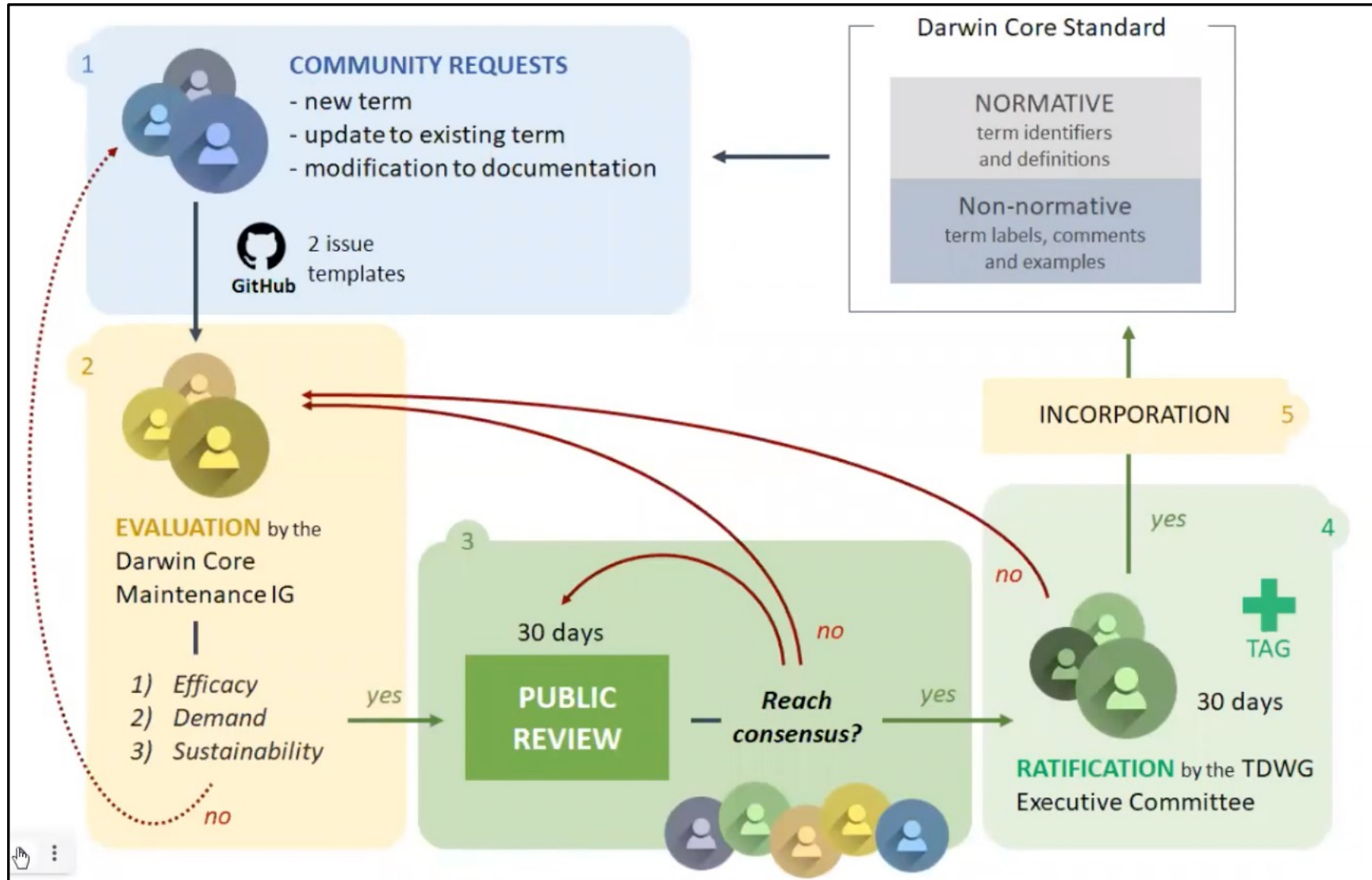
Code Issues (27) Pull requests (1) Actions Projects Security Wiki

Filters: Issue is open Labels (2) Milestones (1) New Issue

77 Open 154 Closed Author Label Projects Milestones Assignee Sort

- Change term - clarify individualCount definition "represented present" **Class - Term**
#285 opened 21 hours ago by danielwell
- Decommission the RDF "ancillary document" and revise the RDF Guide to include relevant bits **Docs - RDF Guide**
#284 opened 12 days ago by backa/h
- New Terms - relationshipOfResourceID to Resource Relation extension **Class - ResourceRelationship**
Process - ready for public comment **Term - New**
#283 opened 15 days ago by jproven
- Request of new terms (hyperLocality, verbatimHyperLocality) **Class - Term** **Process - need evidence for demand**
Process - need templated change request **Term - New**
#282 opened 19 days ago by Anchiang
- Broken link to example Fielded Text metafile **Docs - Single Darwin Core**
#279 opened on Aug 20 by tuculute
- fix backtick problem in list of terms document **Documentation - edit**
#258 opened on Aug 13 by backa/h
- georeferenceVerificationStatus organizedInClass incorrect **Class - Occurrence** **Term - New**
#244

Public review of Darwin Core



Slide from the webinar on the public review : <https://www.youtube.com/watch?v=0Ex6TX38pi8>

Accepted proposals are incorporated on Darwin Core

versioning

TDWG

Metadata for the 2017-10-06 version of

Term Name:

dwc:lifeStage

Label:

Life Stage

Term version

IRI:

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

Version of:

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

Issued:

2017-10-06

Definition:

The age class or life stage of an organism when an occurrence was recorded.

Type:

Property

Status:

recommended

Replaces:

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

Metadata about this term version are available at:

Description	IRI
HTML file (this document)	http://rs.tdwg.org/dwc/terms/
RDF/Turtle	http://rs.tdwg.org/dwc/terms/
RDF/XML	http://rs.tdwg.org/dwc/terms/
JSON-LD	http://rs.tdwg.org/dwc/terms/

For more information about this term version, please refer to the following term list version: <http://rs.tdwg.org/dwc/version/terms/2017-10-06/>

TDWG

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List of Darwin Core terms

Title

List of Darwin Core terms

Date version issued

2021-03-29

Date created

2020-08-12

Part of TDWG Standard

http://www.tdwg.org/standards/450

This version

http://rs.tdwg.org/dwc/doc/list/2021-03-29

Latest version

http://rs.tdwg.org/dwc/doc/list/

Previous version

http://rs.tdwg.org/dwc/doc/list/2020-10-23

Abstract

Darwin Core is a vocabulary standard for transmitting information about biodiversity namespaces currently used in the vocabulary.

Contributors

John Wiecek (VertNet), Peter Desmet (INBO), Steve Baskauf (Vanderbilt University), Markus Döring (GBIF), Quentin Groom (Botanic Garden Meise), Stijn Van Hoey (INBO), Zermoglio (VertNet), Robert Guralnick (University of Florida), John Decker (Genomic Biodiversity Institute), Dave Vieglais (KUNHM), Renato De Giovanni (CRIA), Campbell V. Morris (Harvard University Herbaria/Museum of Comparative Zoology)

Creator

TDWG Darwin Core Maintenance Group

Bibliographic citation

Darwin Core Maintenance Group. 2021. List of Darwin Core terms. Biodiversity Information Standards (TDWG). <http://rs.tdwg.org/dwc/doc/list/2021-03-29>

1 Introduction (Informative)

This document contains terms that are part of the most recent version of the Darwin Core (http://rs.tdwg.org/version/dwc/2021-03-29).

This document includes terms in four namespaces that contain recommended terms (dwc:terms:). However, some terms in these namespaces are deprecated or superseded.

TDWG

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Darwin Core quick reference guide

1 Introduction (Informative)

This document is intended to be an easy-to-read reference of the currently recommended terms maintained as part of the Darwin Core standard. This page itself is not part of the standard. It draws on the term names and definitions from the normative part of the standard and combines them with comments and examples that are not normative, but that are meant to help people to use the terms consistently. Categories such as `Occurrence` and `Event` correspond to Darwin Core classes, which are special category terms used to group sets of terms for convenience. Comprehensive metadata for current and obsolete terms in human readable form are found in a list of terms documents. Files with lists of these terms and their full history can be found in the Darwin Core repository.

To cite the standard upon which this page is built, use the following:

Darwin Core Maintenance Group. 2020. List of Darwin Core terms. Biodiversity Information Standards (TDWG). <http://rs.tdwg.org/dwc/doc/list/>

To cite Darwin Core in general, use the peer-reviewed article on Darwin Core:

Wiecek J, Bloom D, Guralnick R, Blum S, Döring M, et al. (2012) Darwin Core: An Evolving Community Developed Biodiversity Data Standard. PLoS ONE 7(1): e29715. <https://doi.org/10.1371/journal.pone.0029715>

Record-level

type

modified

language

license

rightsHolder

accessRights

biologicalOccurrence

references

institutionID

collectionID

datasetID

institutionCode

collectionCode

datasetName

ownerInstitutionCode

baseOfRecord

informationWithheld

dataGeneralizations

dynamicProperties

type

Property

Identifier

http://purl.org/dc/elements/1.1/type

Definition

The nature or genre of the resource.

Comments

Must be populated with a value from the DCM type vocabulary (<http://dublincore.org/documents/2010/10/11/dcmi-type-vocabulary/>).

Examples

StillImage, MovingImage, Sound, PhysicalObject, Event, Text

modified

Property

Identifier

http://purl.org/dc/terms/modified

Definition

The most recent date-time on which the resource was changed.

Comments

Recommended best practice is to use a date that conforms to ISO 8601-1:2018.

Examples

2013-03-08T14:07:00Z (8 Mar 2013 at 2:07pm in the time zone six hours earlier than UTC), 2000-02-28T08:40Z (20

Record-level

Occurrence

Organism

MaterialSample

Event

Location

GeologicalContext

Identification

Taxon

MeasurementOrFact

ResourceRelationship

UseWithIRI

LivingSpecimen

PreservedSpecimen

FossilSpecimen

HumanObservation

MachineObservation

Implementation of Darwin Core

GBIF: Global Biodiversity Information Facilit

OBIS: Ocean Biodiversity Information System

ITIS : Integrated Taxonomc Information System

Recent developments and groups :

Genomic researcher, Phenology in botany, paleontology ...

And much more.....

More ressources and contacts



TDWG : <https://www.tdwg.org/>



Webinar: How Community Standards Develop and Evolve

<https://www.tdwg.org/news/2021/webinar-how-community-standards-develop-and-evolve/>

Webinar on the last public review:

<https://www.youtube.com/watch?v=0Ex6TX38pi8>

Convener of the DWC maintenance group: [John Wieczorek](#) – VertNet

Anne-Sophie Archambeau
(archambeau@gbif.fr)

