

Modelling Research Expeditions in Wikidata: Best Practice for Standardisation and Contextualisation

In Contributed Oral presentations C01



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Modelling Research Expeditions in Wikidata

Developing Best Practice for Standardisation and Contextualisation

- Expeditions and other collecting events are a **major source of objects in natural history museums**.
- There is a **need to link historical or contemporary research expeditions to other entities**, requiring the unambiguous labelling (and persistent identifiers) of such events.
- **Stable identifiers for expeditions** plus the sharing of metadata and descriptions will facilitate the linking of material objects distributed across museums and related research data.
- **Wikidata is a multilingual community-curated knowledge base** containing data structured in a human- and machine-readable format.
- Our **informal working group** has started to explore using Wikidata to describe research expeditions.

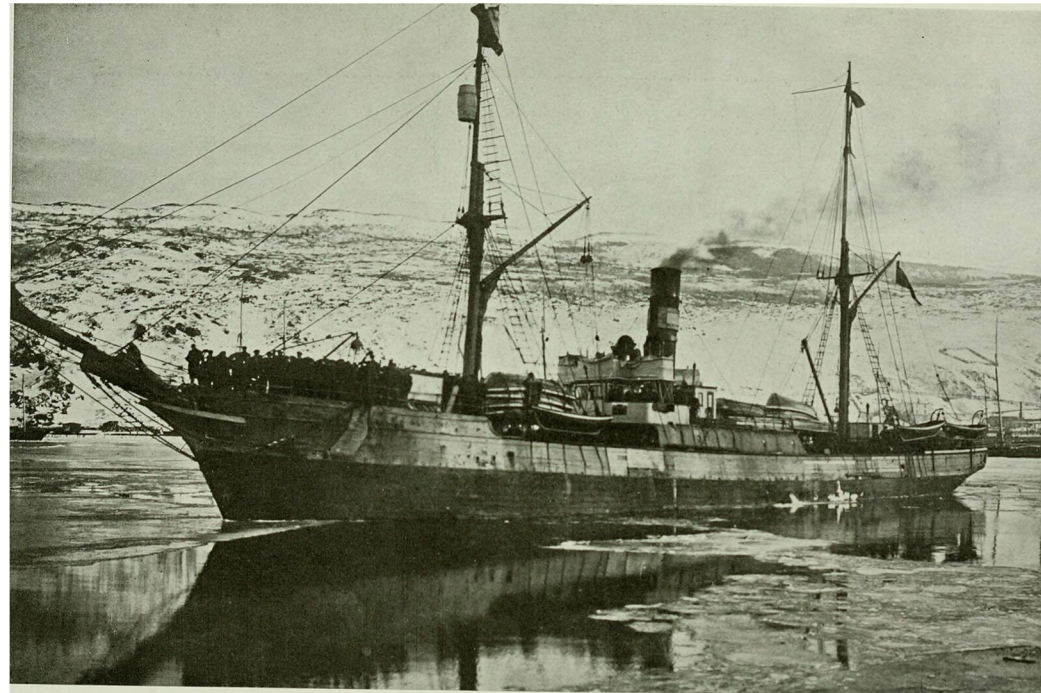


TDWG Task group on Research Expeditions

Proposal - new task group on describing research expeditions

Objectives of the task group:

- Develop **guidelines and best practices** for describing research expeditions in Wikidata.
- Identify and develop **Wikidata metadata properties and tools** for describing research expeditions.
- Develop metadata solutions for **linking research expeditions to museum objects**, to the people who collected these objects, and to publications about or resulting from research expeditions.



CC0 American Museum of Natural History



TDWG Task group on Research Expeditions

Proposal - new task group on describing research expeditions

We want to explore:

- If Wikidata is an appropriate **metadata authoring** system for describing research expeditions.
- Using Wikidata Research expedition, QID [Q366301](#).
- And if Q366301 can be mapped to the **Darwin Core [Event](#)** as the appropriate class for describing such research expeditions.
- Linking expeditions to specimens using [dwc:parentEventID](#)



[CC0, United States National Museum](#)

Why document research expeditions in Wikidata?

- The **open** knowledge base Wikidata is a **collaborative and multilingual** tool to collect and link structured data (on expeditions) in a human- and machine-readable format.
- As of writing, **more than 100 million data items** exist in Wikidata, many of them relevant for scientific collections and expedition data.
- Wikidata allows **easy creation, updating and enriching of items** on specific expeditions, and **provide stable identifiers for expeditions** (that can be used in collection management systems).
- **Expeditions can be linked to participants and other agents** (sponsors, funders, etc.), regions, localities, objects, archival material, maps, and publications (often in the Biodiversity Heritage Library), field notebooks, documentary footage and art works resulting from the expeditions.
- Thus, **providing historical context for the objects** collected and assisting with the acknowledgment of any imperial or colonial impact that may have resulted from the expedition.

Wikidata Research Expedition - Q366301

- More than 400 instances of research expeditions are already described in Wikidata (SPARQL <https://w.wiki/7NGU>)
- Many of these are sources of natural history objects.
- Many linked to specimens published in GBIF.

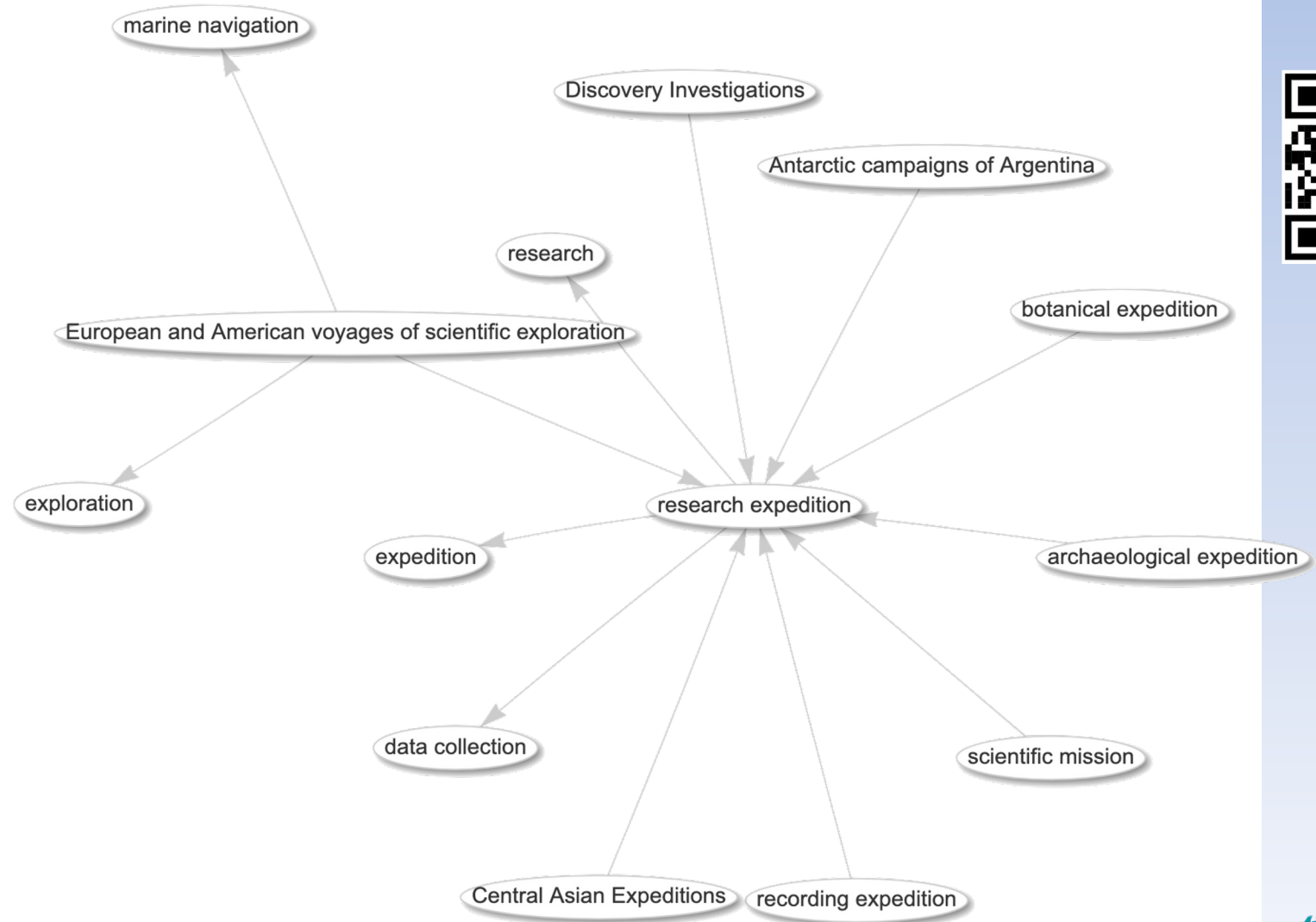


Wikidata Research Expedition - Q366301



**13 sub-classes of
Q366301**

SPARQL at
<https://w.wiki/7dCF>



Wikidata WikiProject Research Expeditions



- Main page
- Community portal
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- Create a new Item
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- Random Item
- Query Service
- Nearby
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Wikidata:WikiProject Research expeditions

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This WikiProject page documents the activities of an international working group on research expeditions. The working group aims to create agreed standards for the modelling of research expeditions on Wikidata and to document the substantive discussion during the creation of these standards. We hope to create a manual and/or hand out guiding editors on how to add or edit research/scientific expeditions in Wikidata. We welcome input on this topic from outside this group, so please leave your comments or questions on the discussion page or get in contact with one of the members.

This project page will be improved and added to during the project.

Items [\[edit\]](#)

Main items [\[edit\]](#)

Current model item: [Harriman Alaska Expedition](#)

Other items [\[edit\]](#)

[Siboga Expedition](#) [Q4201627](#) [Southwest Pacific Expedition 2017](#) [Q121867527](#)



1907 Sub-Antarctic Islands Research Expedition



Research Vessel Tangaroa in Wellington



Wikidata Research Expedition - Q366301



Most used properties for Q366301 | SPARQL at <https://w.wiki/7KYC>

- 1137 participant
- 471 instance of
- 281 start time
- 242 via
- 237 end time
- 227 country
- 153 Freebase ID
- 118 location
- 116 destination point
- 96 Commons category
- 90 vessel
- 89 image
- 73 number of participants
- 70 collection items at
- 60 described by source
- 60 sponsor
- 57 VIAF ID
- 56 start point
- 54 described at URL
- 54 point in time
- 54 Google Knowledge Graph ID
- 48 Library of Congress authority ID
- 44 WorldCat Identities ID (superseded)
- 42 part of
- 40 organizer
- ... etc



We are currently discussing recommended properties at the Wikidata Project page https://www.wikidata.org/wiki/Wikidata:WikiProject_Research_expeditions/Properties

Examples of expeditions described in Wikidata

The TG has selected some expeditions in Wikidata as use cases to be developed into guiding examples.



[CC0 Naturalis Biodiversity Center, Siboga Expedition QQ4201627](#)

Visualisation of Wikidata expeditions

Map Overview | Back To Beginning ↶



The map shows a trail of location pins along the coast of Alaska, indicating the path of the expedition. A historical photograph of the expedition is displayed in a frame on the right side of the map. The photograph shows a group of men in outdoor gear standing in front of a wooden building. The caption below the photo reads "Who Are We?".

HARRIMAN ALASKA EXPEDITION

American research expedition to explore Alaska and Siberia undertaken in 1899

Start Exploring

StoryMapJS | Leaflet | © OpenStreetMap and contributors, under an open license



Harriman
Alaska Exp
[Q1586167](https://www.wikidata.org/wiki/Q1586167)

Screenshot from <https://invirtu.com/researchexpeditions/?QID=Q1586167>,
Photo: Edward S. Curtis, Public domain, via Wikimedia Commons

Third Archbold Expedition (1938-1939) - Q109712735

Connects collections from several institutes and platforms

- The Wikidata item of the *Third Archbold Expedition* contains a.o.:
 - **P** Collecting camps
 - **P** Participants
 - **P** Described by source
 - **P** Commons Category:
 - documentary pictures of
 - locations
 - crew
 - scans of journals

< What's missing?

< How to connect specimens on GBIF? Use the **parentEventID** in CMS



[Archbold expedition in the Baliem valley KITLV 113841, CC BY 4.0 Leiden University Libraries](#)

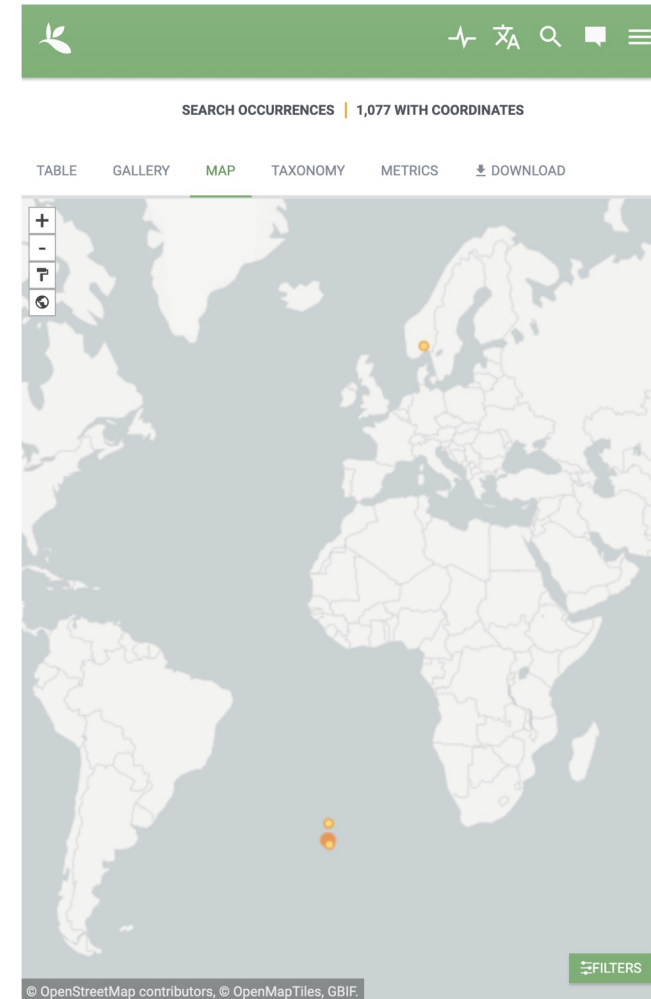
Overview of item using tool *Reasonator*: <https://reasonator.toolforge.org/?q=Q109712735&lang=en>

Tristan da Cunha Expedition (1937-1938) - Q12007460



Norwegian expedition from the Natural History Museum in Oslo

- [Collected material deposited in the Natural History Museum in Oslo.](#)
- [Can be linked to approximately 1354 specimens published in GBIF.](#)
- Not yet linked using **parentEventID** (annotation system under development at the GBIF Node).



Nansen Legacy dataset linked to Wikidata expedition

Dataset on GBIF:

- Trawl catch data from Nansen Legacy
- [doi:10.21335/nmdc-194651742](https://doi.org/10.21335/nmdc-194651742)

Wikidata Expedition:

- Nansen Legacy Joint Cruise 2-2 24th August - 25th September 2021
- [Wikidata Q113302355](https://www.wikidata.org/wiki/Q113302355)

Linked using parentEventID

- [Dataset Events linked to the Wikidata Expedition Entity](#)

Current new datasets published in GBIF from contemporary Nansen Legacy expeditions in the Arctic are linked to Wikidata using **parentEventID**.

The screenshot shows the GBIF dataset page for the Nansen Legacy expedition. The page is titled "EVENT DESCRIPTION" and includes the following information:

- Parent event ID:** <http://www.wikidata.org/entity/Q113302355>
- Event remarks:** 450m, same track back
- Sampling protocol:** Nansen Legacy Version 9
- Published by:** The Nansen Legacy Project
- How to cite:** (button)

Summary statistics:

- 19 Occurrences
- 84% With taxon match
- 100% With coordinates
- 100% With year

19 GEOREFERENCED RECORDS

The map shows the location of the expedition in the Arctic region, near Greenland and Russia. The Lincoln Sea and Greenland Sea are labeled. A red dot indicates the location of the event.

OCCURRENCES PER SPECIES

Species	Count
<i>Eusirus holmii</i> Hansen, 1887	1
<i>Hymenodora glacialis</i> (Buchholz, 1874)	1
<i>Meganctiphanes norvegica</i> (M.Sars, 1857)	1

SIBLING EVENTS: 11

Event ID	Event date	Sampling protocol
c1895da0-193c-11ec-afc5-a3f13bbd5a61	19 September 2021	Nansen Legacy Versio
4356bc70-1608-11ec-afc5-a3f13bbd5a61	15 September 2021	Nansen Legacy Versio
335d6240-10f6-11ec-afc5-a3f13bbd5a61	8 September 2021	Nansen Legacy Versio



Outlook and further work

Further tasks planned for the Expeditions task group



Outlook

New applications for Research Expedition descriptions

Bionomia

- We want to explore linking Research Expeditions in Wikidata to specimens with Bionomia.
- The whereabouts of **expedition participants** can be used to validate Bionomia annotations for **collectors**.
- Participants in given research expeditions can guide suggestions for Bionomia annotations on specimens linked to the expedition.



GRSciColl

- We want to explore if GRSciColl (or something similar) can be expanded to include the **normative identifiers** for research expeditions.
- And designed to be linked to their Wikidata items and described further here, in Wikidata.





Task Groups are organized under one of the Interest Groups

Which IG is most relevant for the proposed Research Expeditions TG?

Contact us if you are interested to join this task group!

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https://www.wikidata.org/wiki/Wikidata:WikiProject_Research_expeditions



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