

Conference Abstract

Advancing Community Curation of Research Expeditions: A Collaborative Journey with Wikidata and Biodiversity Information Standards

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Abstract

Research expeditions are an important source of specimens in natural history collections. To further open up and increase the accessibility of related collection data, unambiguous naming of such events is required, and stable identifiers for the expeditions are needed. In the absence of a global catalogue for expeditions, we recommend the usage of [Wikidata Q identifiers](#). The sharing of metadata and descriptions will facilitate the linking of material distributed across museums and related research data. It will also help to identify further specimens with missing metadata belonging to the same expeditions.

At the 2023 Biodiversity Information Standards (TDWG) [conference in Tasmania](#) was formed. The TG will create best practice recommendations and guidelines for the modelling and linking of expedition data (see the [TG Charter](#), von Mering et al. 2024b). A [GitHub repository](#)^{*2} will be used to facilitate and document the work progress. A

[WikiProject](#)*³ was formed to share resources and to interact and collaborate with the wider community of [Wikimedians](#).^{*1}, an informal international working group presented plans on modelling research expeditions in Wikidata and proposed a TDWG Task Group “Modelling Research Expeditions” (von Mering et al. 2023). This was approved earlier this year and an official [Task Group](#) (TG), under the Collections Description Interest Group,

The open and community-curated knowledge base, [Wikidata](#) To increase transparency and improve accessibility, Wikidata items for historical and contemporary expeditions are created and the events linked to entities such as localities, expedition participants, publications of scientific results, and collections holding specimens gathered during the expeditions. Useful statements include information on the location of archival records related to the expeditions such as field or log books, correspondence or estates of participants. All these Linked Open Data (LOD) can then be used by other tools, e.g., for visualisations of itineraries or in [knowledge graphs](#) (Fig. 1).^{*4}, provides structured data in a human and machine-readable format, which can be edited by anyone in multiple languages.

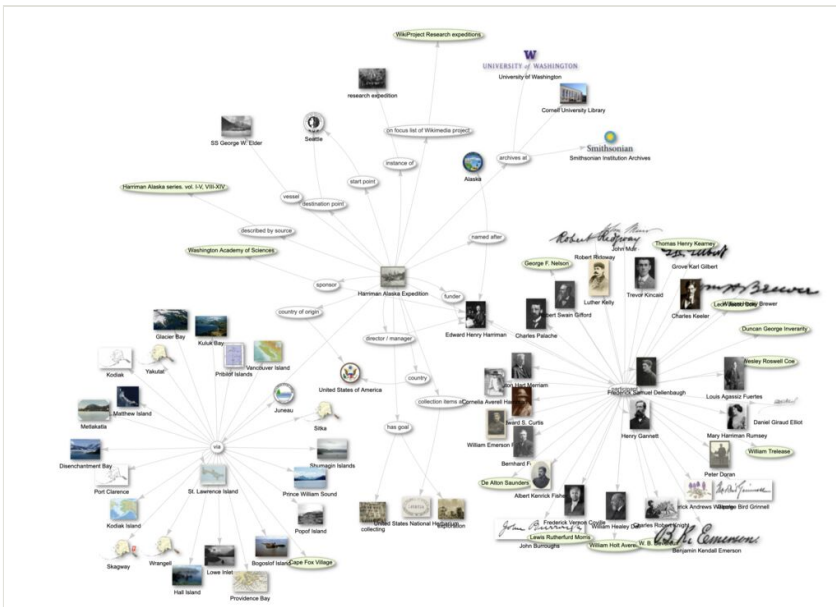


Figure 1. [Harriman Alaska Expedition](#) Wikidata item visualized using [Scholia](#) (screenshot via Wikimedia Foundation, [CC BY-SA 4.0](#)).

The TG is currently developing a terminology, a formal set of terms and definitions used to describe such events, and best practice documentation for modelling research expeditions. First achievements include a draft schema of properties used in Wikidata for research expedition data, which is being trialed at natural history institutions (). The implementation of standard persistent identifiers, such as the Wikidata QIDs, for

expeditions in different Collection Management Systems is encouraged. A [visualization tool](#) is an example of reuse of expedition data and visualisation built in the scope of the TG (Fig. 2; Santos 2023). Leachman and Schrader 2024

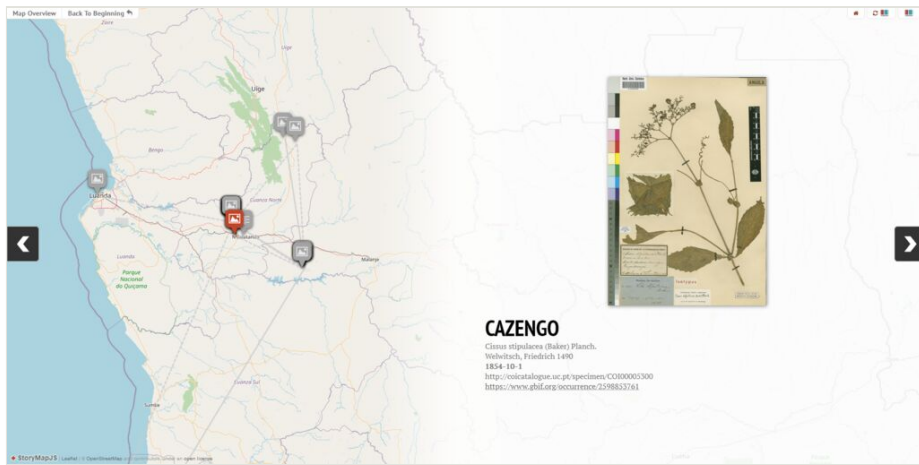


Figure 2.

Visualization of the [Welwitsch Iter Angolense](#) (1853–1860). Linking to [specimens from the Global Biodiversity Information Facility \(GBIF\)](#) is achieved by retrieving the published Wikidata identifier as the Darwin Core term [parentEventID](#) from GBIF datasets, as is being tested by some institutions (screenshot [ODbL license](#)).

The TG is exploring if [GRSciColl](#), GBIF's Global Registry of Scientific Collections, could be expanded to include the normative identifiers for research expeditions. [Bionomia](#) could potentially be expanded to link natural history specimens not only to the world's collectors but also to expeditions. The whereabouts of expedition participants can be used to validate Bionomia annotations for collectors. Participants in a given research expedition can guide suggestions for Bionomia annotations on specimens linked to the expedition. Thus, such expedition data will also support quality control of collection data. Collaborations exist also with the Biodiversity Heritage Library ([BHL](#)) via the [BHL-Wiki working group](#). Many reports and scientific results of expeditions are available via this digital library.

Researchers and other interested parties from around the world are encouraged to advance documentation of research expeditions by sharing data on collection agents and expeditions related to their institutions (von Mering et al. 2024a). Adding and enriching data about expeditions in Wikidata also contributes to the historical contextualisation of such collecting events.

Keywords

collecting event, gathering event, identifier, Linked Open Data, TDWG Task Group

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Conflicts of interest

The authors have declared that no competing interests exist.

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Endnotes

*1 <https://www.tdwg.org/conferences/2023/>

*2 <https://github.com/tdwg/expeditions/>

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

*4 <https://www.wikidata.org>