

January 2024 · Uni S, Berne

SwissCollNet Workshop

Digitization processes in natural history collections: from drawers to data publication

Collection Registry: the « One Swiss Collection » publication

Presentors:

Michelle **Price** SwissCollNet BoE, Head Curator - Conservatory and Botanical Garden of Geneva

Sofia **Wyler** Scientific Officer, GBIF.ch

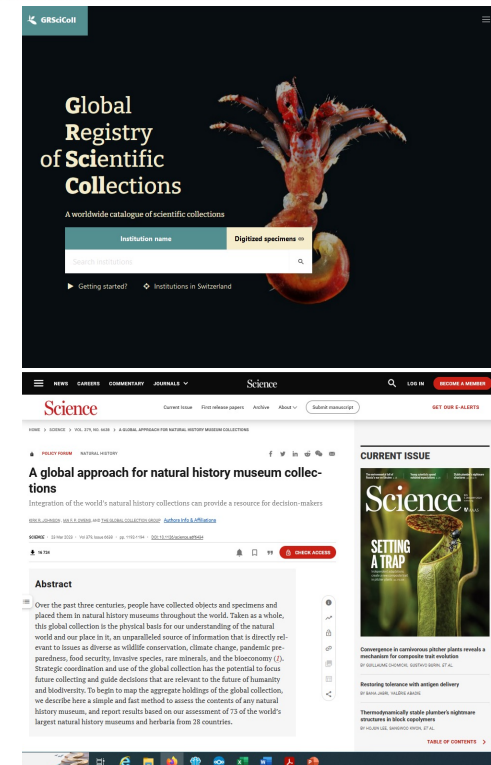
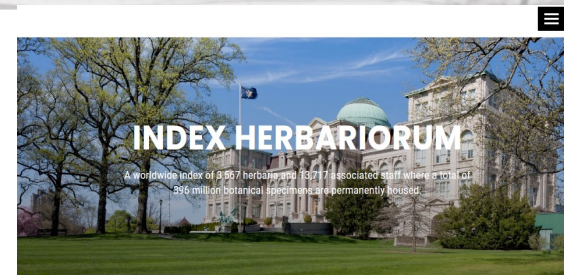
Other members of the « Collections survey taskforce »: Pascal **Tschudin**, Holger **Frick**, Jessica **Joaquim** and Pia **Stieger**

Topics

- Overview of the « One Swiss Collection » publication
- News of the Swiss natural history collections survey
- Links with the Global Registry of Scientific Collections (GRSciColl)

One Swiss Collection

- What is it?
- Why do we need it?
- What will it be used for?
- When and where will it be published?
- What does my institution have to do?



One Swiss Collection:

What is it?

Outcome of the national survey of natural history collections of 2018 and 2021

- overview of natural history collections in Switzerland (how many, where, political structure, source of financial support, research and collections staff structure,...)
- resume of the types of collections held in Swiss institutions and their units (major divisions)
- metadata analysis of the collections, their composition, geogeographic and temporal origins, taxonomic-geological representation, volume of type or reference material, ...
- synthesis of the conservation status and digitisation status of Swiss collections

One Swiss Collection: Why do we need it? What will it be used for?

Evolution in the global landscape for NHC:

-raising of awareness of the importance of NHC's and the need to know where collections are -> creation of the CETAF Collections Registry; adoption of the Global Registry for Scientific Collections (GRSciColl) by GBIF; linking of Index Herbariorum with GRSciColl. Global NHC publication in Science (2023)



Evolution in the landscape for NHC specimen digitisation:

-focus on collection digitisation within CETAF -> creation of the Distributed System of Scientific Collections (DISSCo) Research Infrastructure. iDigBio active in the USA.

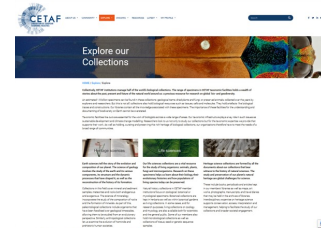
Focus on data standards : TDWG and European projects: ICEDIG, COST Mobilise & DISSCO Prepare



One Swiss Collection: Why do we need it? What will it be used for?

Country-wide overview of NHC's (one of the first that we know about!)

- baseline understanding of the richness and diversity of CH NHC
- political leverage
- identification of gaps / strengths
- monitoring of progress (conservation status and digitisation)
- focus on developing training
- future prioritisation (collecting / management / digitisation)
- communication tool
- > national identity -> national cooperation -> national coordination (strategy for Swiss NHC)



One Swiss Collection: What does my institution have to do?

Lead contact for the Collections survey to confirm their institution's Director's name and the names of the 1-2 persons involved with completing the survey (to be included in the publication)

Director: Name

Contributor 1, Name, function in institution

Contributor 2, Name, function in institution

-> to be coordinated by the SwissCollNet team

Complete the additions and refinements per institution, according to the request from the Collections survey taskforce (to be sent out after this WS).

- > listen attentively to our GBIF.ch colleagues (Pascal and Sofia) who will give an overview of the novelties and areas of focus in the collections survey, and their information on their collaboration with GRSciColl.

One Swiss Collection

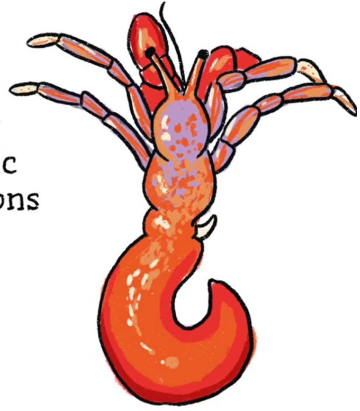
- National Survey of Natural History Collections of 2018 and 2021
- Global Registry for Scientific Collections (GRSciColl)
- Global Natural History Collection Publication in Science (2023)
- Natural History Collection Specimen Digitisation
- One Swiss Collection

One Swiss Collection

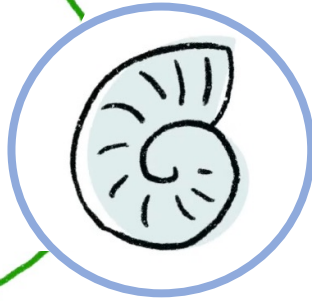
- National Survey of Natural History **Collections** of 2018 and 2021
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- Global Natural History **Collection** Publication in Science (2023)
- Natural History **Collection** Specimen Digitisation
- One Swiss **Collection**



Global
Registry
of Scientific
Collections



 **GBIF**



Reference Data
Update & Connection

 **GBIF.ch**
Swiss Node

Content Data
Harmonisation & Analyses

One Swiss Collection



Institutions

Collections

Specimens


About ▾

How-to ▾

Contact

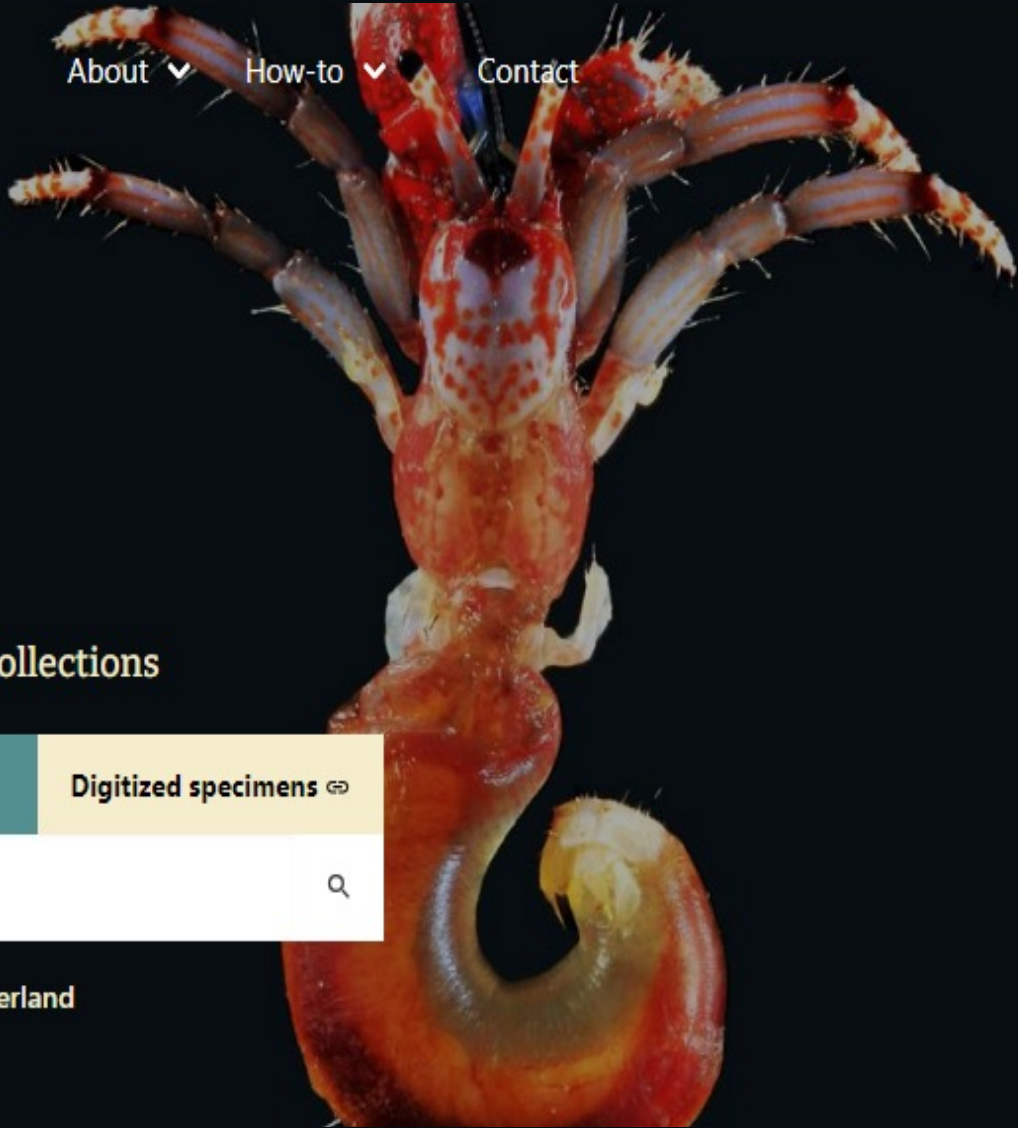
Global Registry of Scientific Collections

A worldwide catalogue of scientific collections

Institution name	Digitized specimens ↔
<input type="text" value="Search institutions"/> 	

▶ Getting started?

📍 Institutions in Switzerland



One Swiss Collection

Reference Data

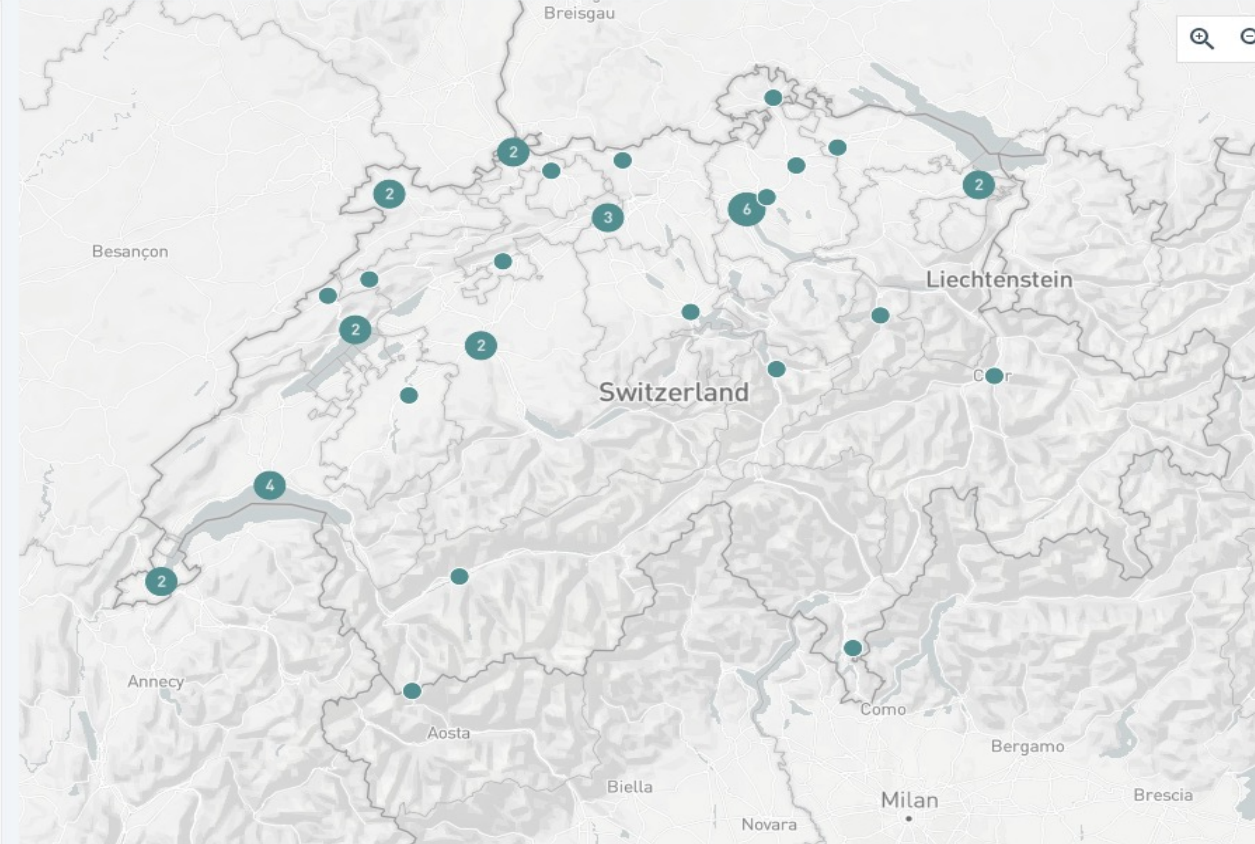
Institutions

Text search Code Country or area : Switzerland Number of specimens Specimens in GBIF more

52 results Download as TSV

Title	Code	Country or area	City	Collections	Number of specimens
Muséum d'histoire naturelle de la Ville de Genève	MHNG	Switzerland	Geneva	7	15,000,000
Naturhistorisches Museum Basel	NMB	Switzerland	Basel	27	11,773,532
Naturhistorisches Museum der Burgergemeinde Bern	NMBE	Switzerland	Bern	5	6,000,000
Conservatoire et Jardin botaniques de la Ville de Genève	G	Switzerland	Genève	1	6,000,000
Musée cantonal de zoologie, Lausanne	MZL	Switzerland	Lausanne		4,000,000
Eidgenössische Technische Hochschule Zürich	ZT	Switzerland	Zürich	1	2,000,000
Universität Zürich	Z	Switzerland	Zürich	1	1,500,000
Musée cantonal de géologie, Lausanne	MCGL	Switzerland	Lausanne		1,000,000
Zoologisches Museum Zürich	ZMZ	Switzerland	Zürich		1,000,000
Universität Basel, Herbarien Basel	UNIBAS-HERBARIA	Switzerland	Bottmingen	4	821,718
Musée et Jardins Botaniques Cantonaux MJBC	LAU	Switzerland	Lausanne	1	800,000
Muséum d'histoire naturelle de Neuchâtel	MHNN	Switzerland	Neuchâtel	4	687,544
Museum.BL, Liestal	Museum.BL	Switzerland	Liestal		638,000

42 results with coordinates



One Swiss Collection

Reference Data

☰ Collections

Text search Institution Code Country or area : Switzerland × Number of specimens Specimens in GBIF more

96 results Download as TSV

Title	Code	Country or area	City	Number of specimens	Specimens in GBIF
Herbarium - Conservatoire et Jardin botaniques de la Ville de Genève Conservatoire et Jardin botaniques de la Ville de Genève	G	Switzerland	Genève	6,000,000	2,400
Herbarium - Eidgenössische Technische Hochschule Zürich Eidgenössische Technische Hochschule Zürich	ZT	Switzerland	Zürich	2,440,000	14,768
Herbarium - Universität Zürich Universität Zürich	Z	Switzerland	Zürich	1,840,000	20
Herbarium - Musée et Jardins Botaniques Cantonaux MJBC Musée et Jardins Botaniques Cantonaux MJBC	LAU	Switzerland	Lausanne	1,000,000	393
Herbarium - Herbarium of the Botanical Garden of the University of Bern Herbarium of the Botanical Garden of the University of Bern	BERN	Switzerland	Bern	500,000	
Herbarium of the Université de Neuchâtel, Switzerland. Herbarium of the University of Neuchatel, Switzerland	NEU	Switzerland	Neuchâtel	455,000	3,761
Herbarium - Universität Basel, Herbarien Basel Universität Basel, Herbarien Basel	BASBG	Switzerland	Bottmingen	301,843	1
Herbarium - Universität Basel, Herbarien Basel Universität Basel, Herbarien Basel	BAS	Switzerland	Bottmingen	250,000	
Herbarium - Museo cantonale di storia naturale, Lugano Museo cantonale di storia naturale, Lugano	LUG	Switzerland	Lugano	100,000	14,540
Herbarium - Naturmuseum St. Gallen Naturmuseum St. Gallen	NMSG	Switzerland	St. Gallen	100,000	
Herbarium - Natur-Museum Luzern Natur-Museum Luzern	NMLU	Switzerland	Lucerne	90,000	10,991

One Swiss Collection

Reference Data

Get data How-to Tools Community About

Switzerland

A GBIF Voting participant from Europe and Central Asia
Names of countries and areas are based on the [ISO 3166-1 standard](#)

DATA FROM SWITZERLAND

22,359,197

Published occurrences

47,419

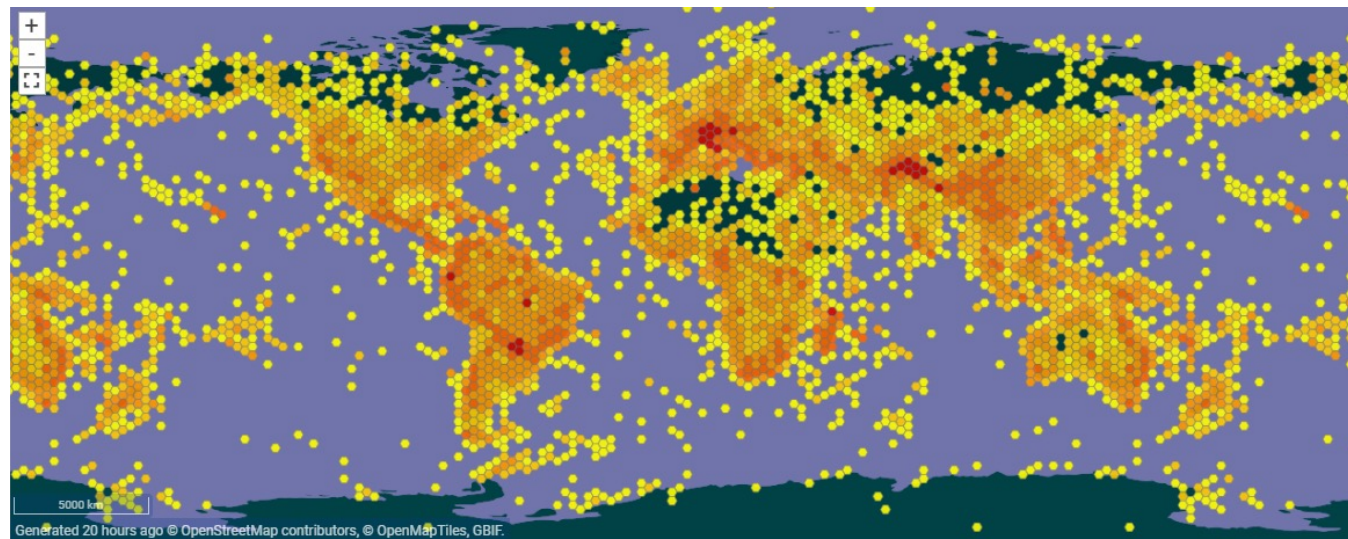
Published datasets

251

Countries and areas covered by
data from Switzerland

17

Publishers from Switzerland



Institution code | MHNN

Muséum d'histoire naturelle de Neuchâtel

[www.museum-neuchatel.ch](#) [Switzerland](#) > Neuchâtel [687,544 specimens](#)

[About](#) [4 collections](#) [Specimens](#)

Description

Contact

Identifiers

[About](#) [4 collections](#) [Specimens](#)

Vertebrates

Code: MHNN-VERTEBRATA

Entomology

Code: MHNN-ENTOMO

Corals

Code: MHNN-CNIDARIA

Mollusks

Code: MHNN-MOLLUSCA

Collection code | MHNN-ENTOMO

Entomology

From **Muséum d'histoire naturelle de Neuchâtel**

👤 Jessica Litman
🌐 www.museum-neuchatel.ch
🌍 Switzerland > Neuchâtel
📍 521,600 specimens

[About](#)
[Specimens](#)
[Dashboard](#)

Description

Estimated number of specimens (individual specimens): 521'600. Formation period: 1840-ongoing. Geologic period: Present. Estimated number of species: 4'854. Number of types: 746 (Holo- and Lectotypes: 60, Syntypes: 686). SCSPS: 5 [Jessica Litman, updated 2022-04-14]



Metadata

521,600 records

Taxonomic description	Arthropoda: Insecta, other arthropods
Geographic description	Switzerland; Europe; World
Code	MHNN-ENTOMO
Number of specimens in collection	521,600
Specimens shared with GBIF	1,287
Content types	Biological preserved organisms
Preservation types	Sample pinned • Sample fluid preserved
Incorporated collections	Frédéric (Fritz) Favarger (-Bourgeois)



OCCURRENCE DATASET | REGISTERED JULY 16, 2019

MHNN Neuchâtel: Entomological Collection

Published by [Muséum d'histoire naturelle de Neuchâtel – MHNN](#)

Litman J

[DATASET](#)[METRICS](#)[ACTIVITY](#)[↓ DOWNLOAD](#)[⇌ HOME PAGE](#)

1,287 OCCURRENCES

75 CITATIONS

Entomological Collection

Publication date: January 12, 2024

Metadata last modified: January 12, 2024

Hosted by: [GBIF Swiss Node](#)

Licence: [CC BY 4.0](#)

[” How to cite](#) [DOI](#) [10.15468/aka0mb](#)



1,287
Occurrences



100%
With taxon match



100%
With coordinates



100%
With year



Collection code | MHNN-ENTOMO

Entomology

From **Muséum d'histoire naturelle de Neuchâtel**

Jessica Litman

www.museum-neuchatel.ch

Switzerland > Neuchâtel

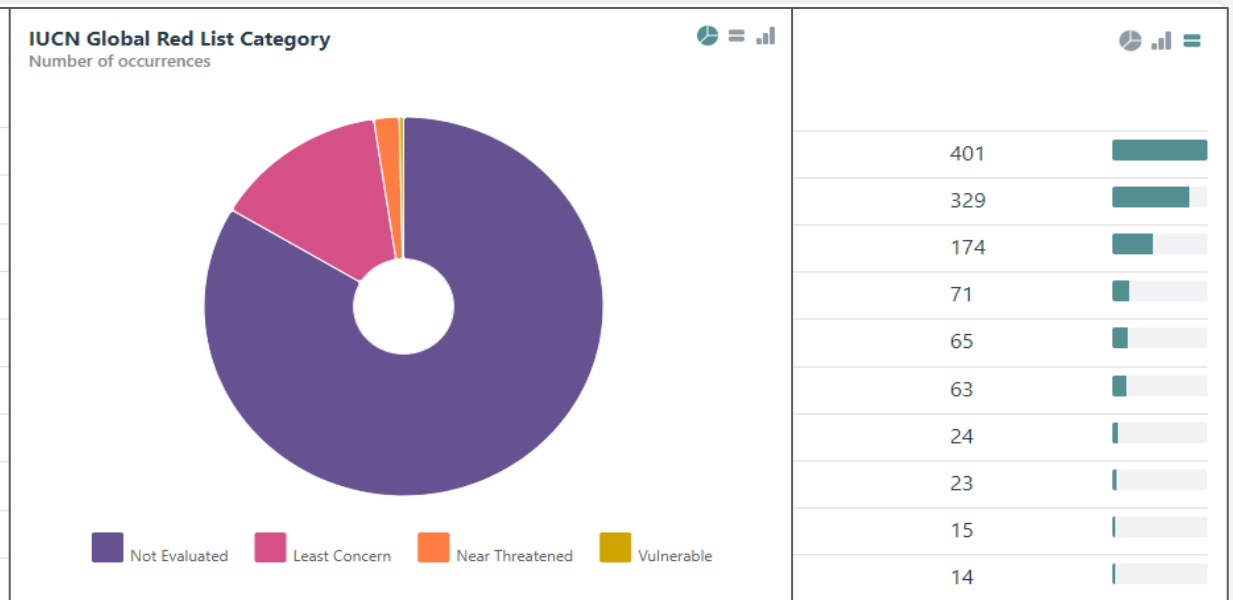
Unknown size

About Specimens Dashboard

Statistics	
Occurrence records	1,287
Species	246
Taxa	456
Year range	From 1886 to 2018

Data richness	
Identified to species	1,282
With coordinates	1,287
With year	1,287
With collector	1,287

Recorded by	Number of occurrences
85 results	
Chittaro Yannick	
Mayr Anton	
Sanchez Andreas	
Wermeille Emmanuel	
Bros de Puechredon ("de Bros") Emmanuel	
Abderhalden Michele	
Farina Laura	
Chittaro Marie-Christine	
Buro Max	
Albrecht Martin	



Swiss natural history collections network (SwissCollNet)

SwissCollNet is committed to improving the accessibility of natural history collections. A common vision and long-term strategy will promote the use of natural history collections for research, education and society.

Image: OscarLoRo, stock.adobe.com

[Implementation](#) +[Running projects](#) +[Collection data](#) +[Exchange](#) +[Organisation](#) +

Collection Survey




Image: Philippe Wagneur / Muséum Genève

A priority of SwissCollNet is to make visible the diversity, the quality and the importance of the natural history collections curated in Switzerland. To get a more detailed picture, SwissCollNet and GBIF Switzerland collaborate to update the survey that was carried out in 2018.

The survey follows the structure of 2018 with adjustments to reach the level of detail necessary for a publication on the *Registry of Scientific Collections* run by GBIF ([GRSciColl](#)), which is also synchronised with *Index Herbariorum*. As a result, each institution will be able to connect their collection data with their institution record in the registry, following international identifiers, indicators and standards.

Contact

GBIF Schweiz (Global Biodiversity Information Facility)
c/o info fauna
Avenue de Bellevaux 51
2000 Neuchâtel
Switzerland

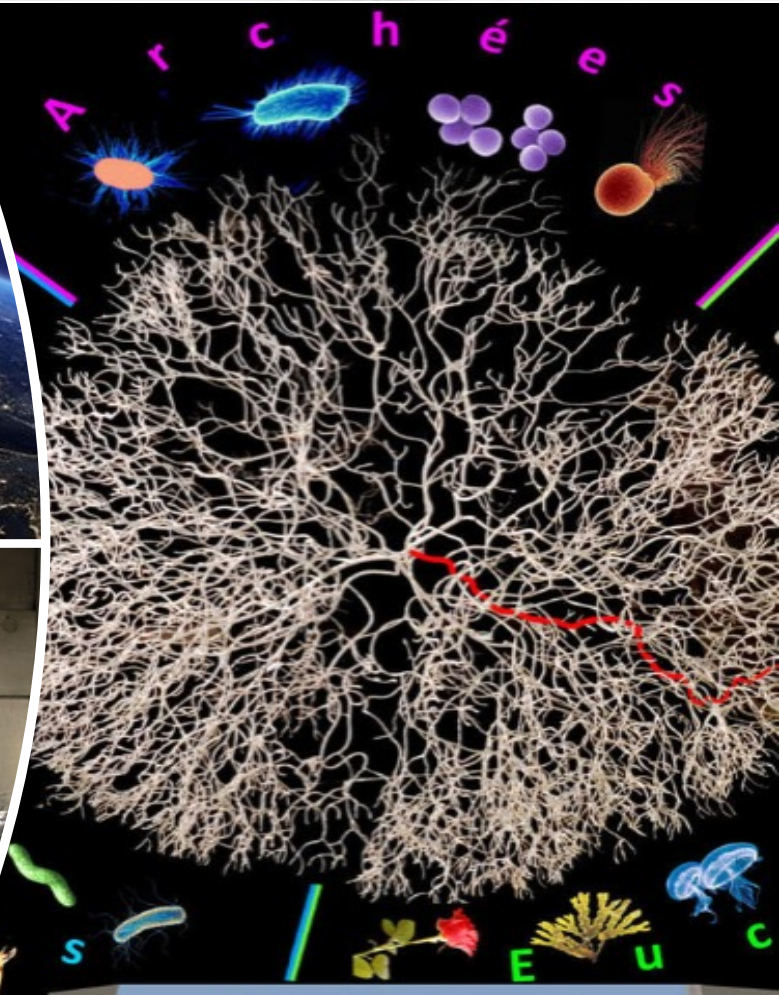
 [E-mail](#)

[Collection Survey Guidelines](#) >[Collection Survey Matrix](#) >

One Swiss Collection

Content Data

- Domains representativity
- Geographical coverage
- Taxonomic coverage
- Conservation status
- Specimen estimates



Le buisson du vivant
The tree of life

One Swiss Collection

Content Data



SPECIES ESTIMATE*

> 1000



SPECIES ESTIMATE*

150000-300000



NUMBER OF TYPES*

more than zero



PRESERVATION METHOD*

lots of specimens



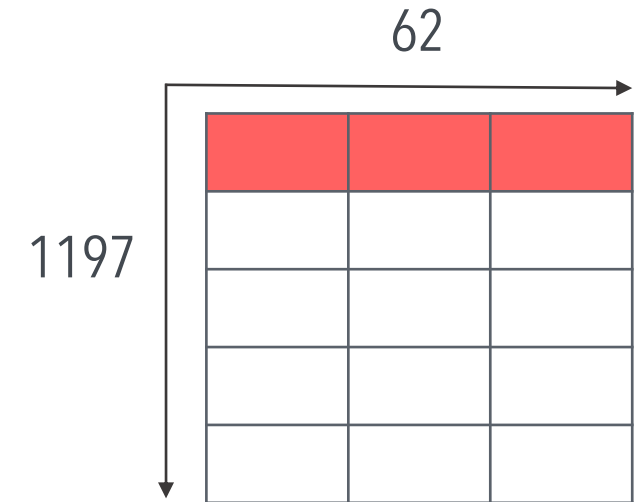
NUMBER OF SPECIMENS*

500000 (?)



NUMBER OF SPECIMENS*

$\sum [Y55-Y58]$

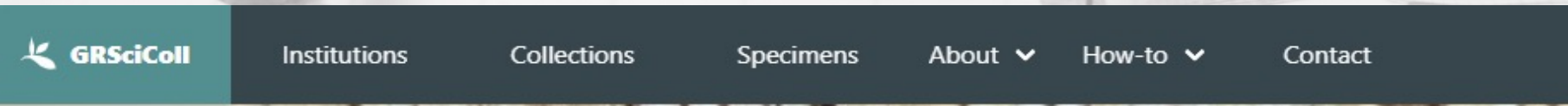


SwissCollNet initiative
Digitisation efforts



One Swiss Collection

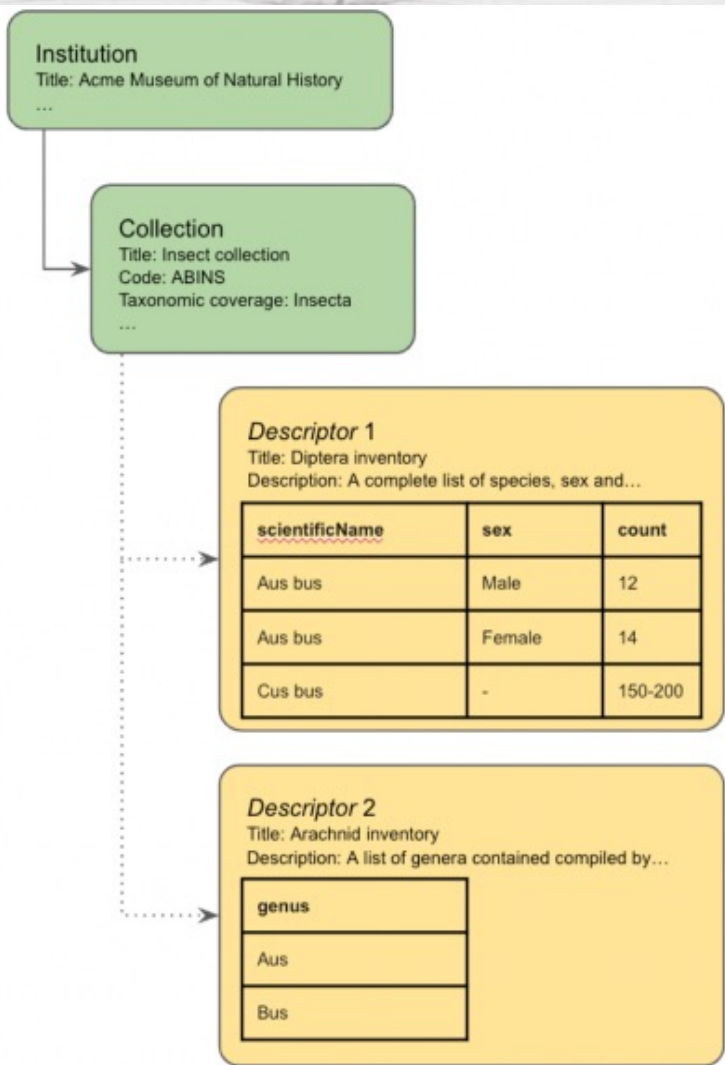
Content Data



GRSciColl 2023-2024 road map

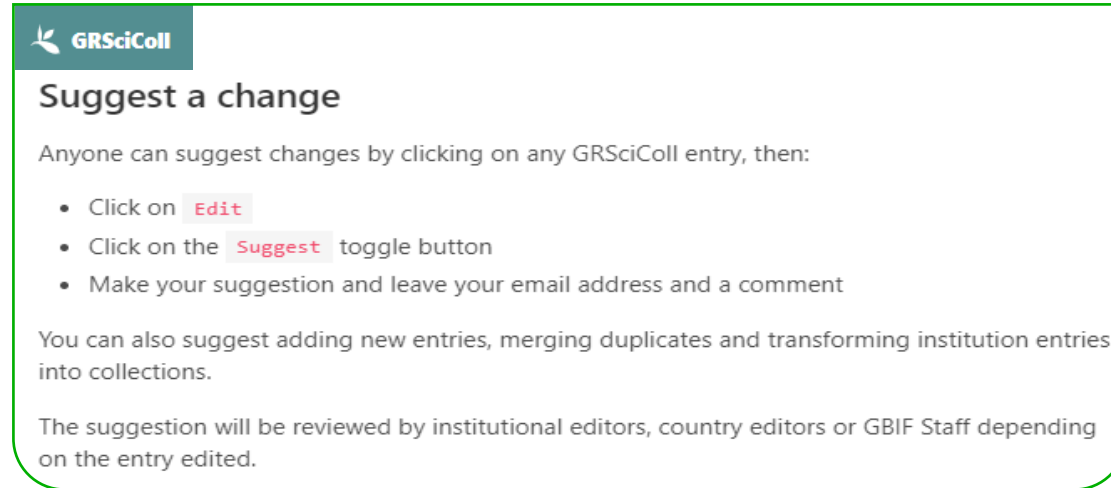
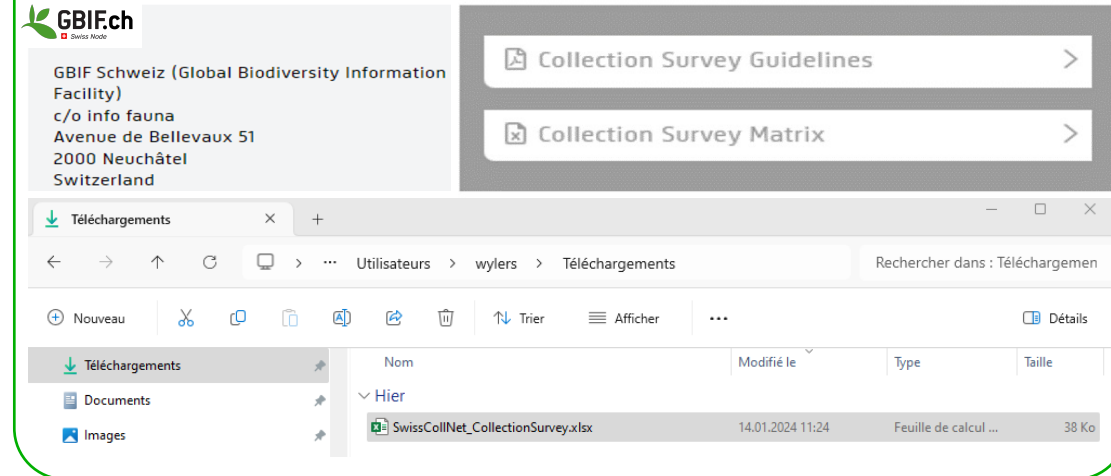
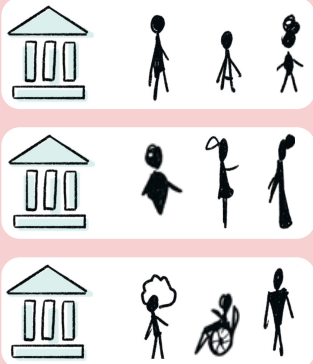
This road map builds in the [2021 road map](#) as well as the efforts in 2022 to build a community of editors and mediators.

1. Review data schema
2. Support structured collection descriptors



One Swiss Collection

What does my institution have to do ?



COMMUNICATE THE CONTACT PERSONS {COLL. SURVEY}

(authors of the future publication)

Director

Name

Contributors 1-2

Name Fonction

COMPLETE THE TARGETED INFORMATION {COLL. SURVEY}

(upon request from the taskforce team)

Staff

Political leverage

Collections

Indicators estimations

REVIEW THE INSTITUTIONS {GRSCICOLL}

(directly on GBIF website)

Suggestions

Update

Comment

Merge

