

Collection Registry: the « One Swiss Collection » publication

Presentors:

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Topics

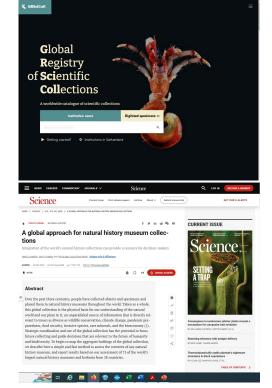
- Overview of the « One Swiss Collection » publication
- News of the Swiss natural history collections survey
- Links with the Global Registry of Scientific Collections (GRSciColl)



- 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?







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)



-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 richeness 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: When and where will it be published?

SwissCollNet « Collections survey taskforce » actively drafting the article and standardising / analysing the survey data (next part)

- -> institutions surveyed to be listed with 2-3 representatives per institute added as contributors
- -> discussions held with the diamond open access journal *European Journal of Taxonomy*
- -> final draft planned for the first quarter of 2024



Working title: One Swiss Collection: the distributed network of natural history institutions

Note: The document should be approached as being a resume of Swiss institutions and their NHCs collectively and no comparison between institutions. The aim is to create an overview to show the collective strengths (weaknesses of institutions of institutions as a whole. It is not a competition about who is "heef" or the broads or to show who is "assest".

Authors: Core team (Michelle Price, Holger Frick, Pascal Ischudin, Jessica Joaquim, Sofia Wyler, Pia Steiger) & all SwissCollMet contributing institutions that form the Collections Group of Switzerland (Director and/or a maximum of 1-2 other persons per institution). [Manage names / institutions in Excel table]

Abstrac

Introduction

Background -> SCNAT collections group ->report on Swiss Collections -> Swiss Collect -> Swiss collection network -

Natural history collections contain biological (animals, plants, fungi, microorganisms fossiis) and geological specimens (sediments, soil samples, rocks, minerals and mineral resources, enteroires collected over the past 259-300 years from across the globe. The world's natural history collections represent a rich part of our cultural ascientific herdrage, but more importantly they form the foundation for our scientific understanding of the natural world, of past and present biodiversity as well as o evolutionary and geological processes. Serving as geo-banks and biobanks they are key to preserving records of the Earth's geological, gragnismal and genomic diversity. They play a central role in interpreting the natural world under changing conditions and predicting future patterns and processes. A recent global approach to evaluating the size, [function-galities] and potential impact of 73 of the largest natural history collections provided baseline information on the location, volume and origins of collections across the globa eliowing for a landscape mag that can be used to develop coordinated globa strategic actions to enhance collections and ensure their sustainability and scientific use (Johnson et al., 2023).

In Switzerland, natural history collections are housed and managed by over 80 public natural history institutions, namely natural history museums, science centres and botanical gardens, from 22 cantons across the country. Swiss natural history museums, sciences centres and botanical gardens are generally funded, for their core operating budget, by the federal government, spatigo, or thy in which they are located. Some institutions receive funding from other sources such as the Federal Office of Culture or from private foundations. For most natural history museums, science centres and botanical gardens in Switzerland, it is a statuary obligation to ensure that the collections are conserved and studied. Natural history collections in Switzerland, became the focus of initiative of the Swiss Academy of Sciences (SCNAT) in 2011. The understanding that international initiatives were actively focusing on collections, and that Switzerland ran the risk of Jacquing behind, a collections task force was created



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.



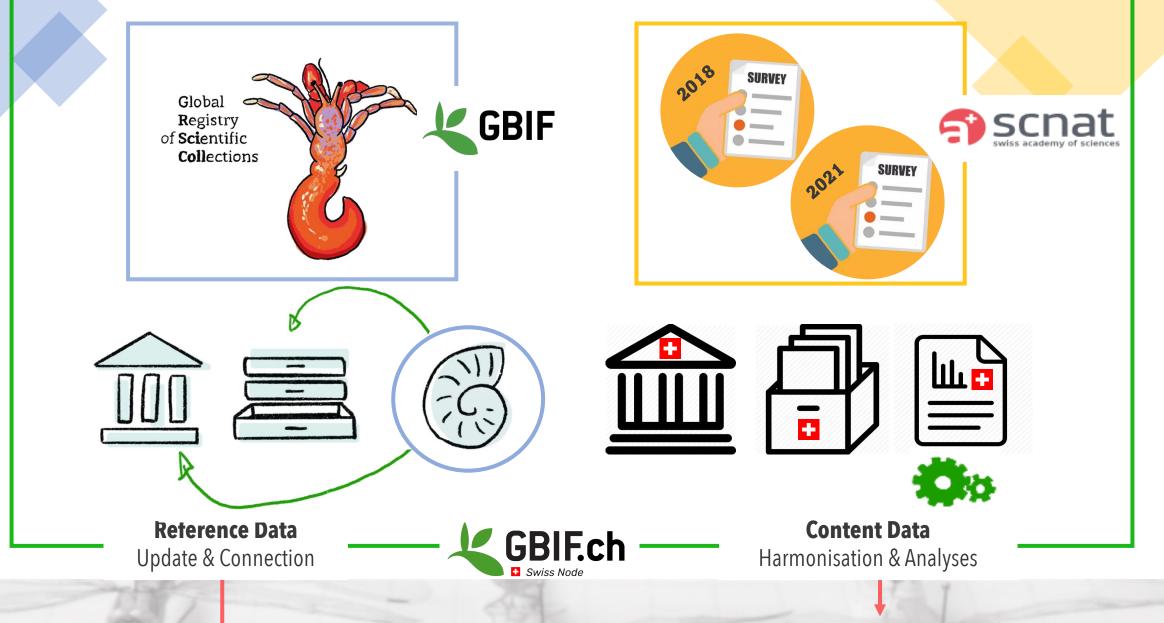
- National Survey of Natural History Collections of 2018 and 2021
- Global Registry for Scientific Collections (GRSciColl)
- Global Natural History Collection Publication in Science (2023)
- Natural History Collection Specimen Digitisation
- One Swiss Collection



- National Survey of Natural History Collections of 2018 and 2021
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- One Swiss Collection









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Collections

Specimens

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Global Registry of **Sci**entific **Coll**ections

A worldwide catalogue of scientific collections

Institution name

Digitized specimens @

Q

Search institutions

Getting started?

Institutions in Switzerland



Reference Data

K GRSciColl

Institutions

Collections

Specimens

Contact

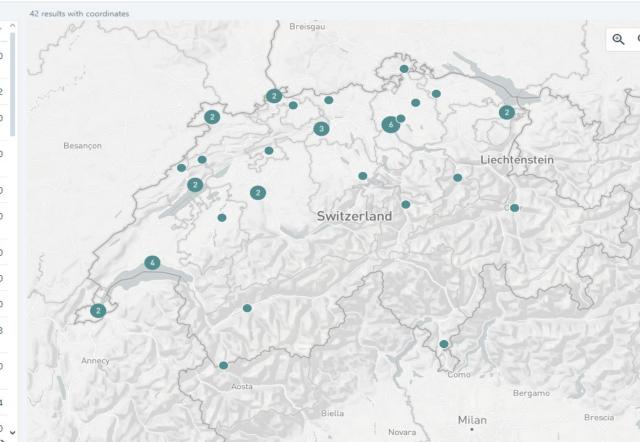
III Institutions

Text search

Country or area : Switzerland ×

Number of specimens | Specimens in GBIF

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





Reference Data

∠ GRSciCoⅡ

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III Collections

96 results Download as TSV

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

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. Berbarium 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

Reference Data

Get data

How-to

Tools

Community

About





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

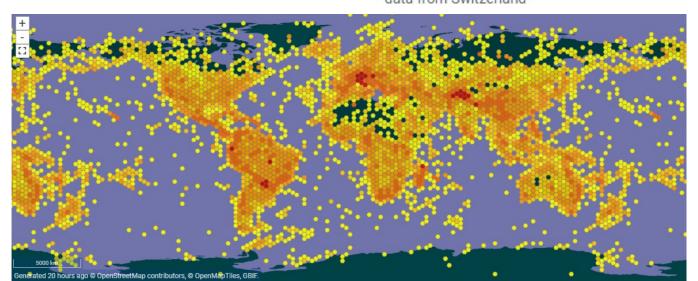
Published datasets

251

Countries and areas covered by data from Switzerland

17

Publishers from Switzerland





Institutions

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Contact

Institution code MHNN

Muséum d'histoire naturelle de Neuchâtel

www.museum-neuchatel.ch

Switzerland > Neuchâtel

1 687,544 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



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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 521,600 collection

Specimens shared with 1,287

Content types Biological preserved organisms

Preservation types Sample pinned • Sample fluid preserved

Incorporated collections Frédéric (Fritz) Favarger (-Bourgeois)

ACTIVITY

◆ DOWNLOAD

⇔ HOME PAGE

DATASET

METRICS



OCCURRENCE DATASET | REGISTERED JULY 16, 2019

MHNN Neuchâtel: Entomological Collection

Published by Muséum d'histoire naturelle de Neuchâtel - MHNN

Litman J

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 99 How to cite DOI 10.15468/aka0mb 100% 1,287 100% 100% With taxon match With coordinates With year Occurrences



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□ II. ②

Collection code MHNN-ENTOMO

Entomology

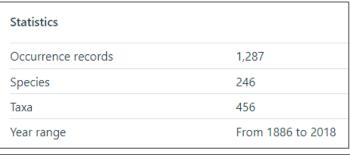
From Muséum d'histoire naturelle de Neuchâtel

Jessica Litman

www.museum-neuchatel.ch

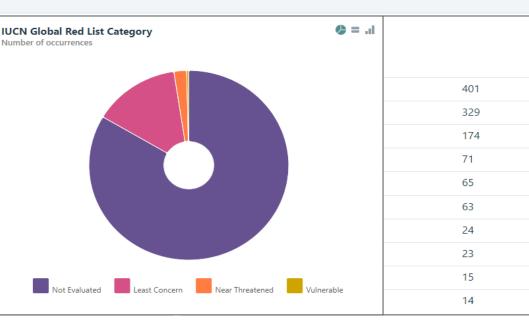
Switzerland > Neuchâtel 1 Unknown size

About Specimens Dashboard



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













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.

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☑ E-mail

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

(A) Collection Survey Guidelines Collection Survey Matrix

Content Data

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



Content Data



SPECIES ESTIMATE*

> 1000



SPECIES ESTIMATE*

150000-300000



NUMBER OF TYPES*

more than zero



PRESERVATION METHOD*

lots of specimens



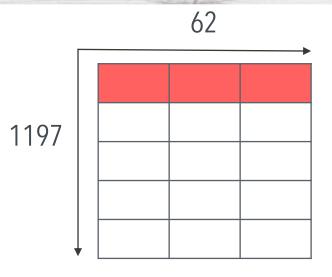
NUMBER OF SPECIMENS*

500000 (?)



NUMBER OF SPECIMENS*

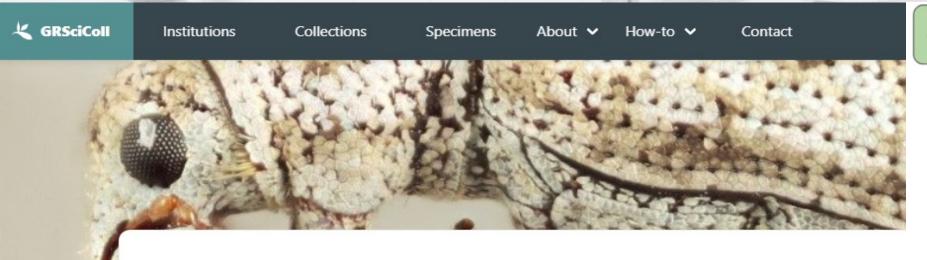
∑[Y55-Y58]



SwissCollNet inititiave Digitisation efforts



Content Data



GRSciColl 2023-2024 road map

This road map builds in the <u>2021 road map</u> as well as the efforts in 2022 to build a community of editors an mediators.

- 1. Review data schema
- 2. Support structured collection descriptors

Institution
Title: Acme Museum of Natural History
...

Collection
Title: Insect collection
Code: ABINS

Taxonomic coverage: Insecta

...

Descriptor 1

Title: Diptera inventory
Description: A complete list of species, sex and...

× 2	scientificName	sex	count
	Aus bus	Male	12
	Aus bus	Female	14
	Cus bus	-	150-200

Descriptor 2

Title: Arachnid inventory

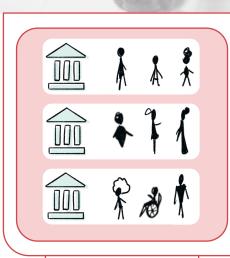
Description: A list of genera contained compiled by...

genus

Aus

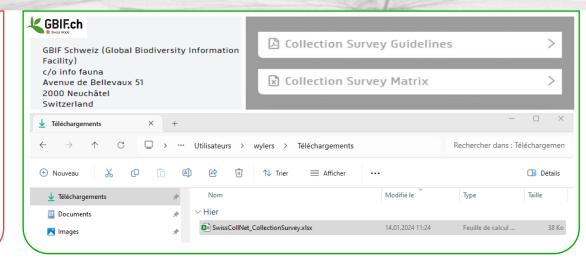
Bus

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

Function

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



Suggest a change

Anyone can suggest changes by clicking on any GRSciColl entry, then:

- Click on Edit
- Click on the Suggest toggle button
- Make your suggestion and leave your email address and a comment

You can also suggest adding new entries, merging duplicates and transforming institution entries into collections.

The suggestion will be reviewed by institutional editors, country editors or GBIF Staff depending on the entry edited.

