

Flora Unveiled: Exploring the Diverse Plant
Collections of Berlin's Botanical Garden and
Museum

Lisa Sommer

2023-07-06

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Chapter 1

Part of the series: Baroque TOC

Programme instructions

2023-07-07 v1.0

A herbarium specimen of *Ranunculus seguieri* Vill. collected by Stein, B. <https://www.jacq.org/detail.php?ID=1806941> This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

Example publications:

- Exhibition catalogue demo: `toc Baroque /toc` from Experimental Books – Re-imagining Scholarly Publishing, COPIM. Workshop URL: <https://experimentalbooks.pubpub.org/programme-overview>
- Publishers catalogue demo: ScholarLed A catalogue of ScholarLed presses built on a Quarto / Jupyter Notebook model for computational publishing. The publication is automatically updated daily to reflect any new books added by the publishers.
- Proof of concept #1 - Computational Publication: Computational Publishing for Collections - ADA CP Prototype #1 - Nov 22
- Proof of concept #2 - To be confirmed, completion for end of April 2023. This contains all parts fully rendered: Cover, colophon, essay, collection, graph, TIB AV Portal, Semantic Kompakkt
- semanticClimate: To be confirmed - customised research papers readers made for regional climate change action plans based on IPCC reports and sourcing content from open research repositories.

- FSCI Summer School - publishing from collections class: To be confirmed, July 2023

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Chapter 2

Colophon

PUBLISHING FROM COLLECTIONS USES OF COMPUTATIONAL PUBLISHING AND LINKED OPEN DATA

Open Science Lab - TIB Hannover

First published 2023-03-30

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Repository URL: <https://github.com/Pgxe9zu1/catalogue-003>

Chapter 3

Catalogue Experiment: Baroque AI

Nextcloud Markdown document link: <https://tib.eu/cloud/s/qBx8SbqiPBbedye>

3.1 Part of the series: Baroque TOC

- Class instructions and all links: <https://nfdi4culture.github.io/class-ADA-CP-pipeline/>
 - Demo publication: <https://nfdi4culture.github.io/catalogue-003/>
 - Repo link: <https://github.com/NFDI4Culture/catalogue-003>
-

3.2 Add your name:

- Lisa Sommer

3.3 Text editing

The data set “Plant specimens from the Botanical Garden Berlin” is a valuable collection obtained from the NFDI 3D hackathon. It consists of approximately 67,000 rows and four columns containing essential information.

The first column provides links to the plant specimens, allowing users to access detailed information and images. The second column contains the names of the recorded plants, providing botanical identification. The third column specifies the names of the individuals responsible for recording the specimens. Finally,

the fourth column sporadically includes the Wikidata links of the respective persons, offering additional context and background information.

The herbarium of the Botanic Garden and Botanical Museum Berlin, established in 1819, stands as the largest herbarium in Germany, housing an impressive collection of 3.6 million dried and preserved plant specimens. In an effort to enhance accessibility, the herbarium has been digitizing its specimens since 2000, making them available on the Internet. Presently, around 200,000 records are digitally accessible through the web, providing researchers and enthusiasts with a wealth of botanical knowledge and resources.

-OpenAI. (2023). ChatGPT (May 24 version) [Large language model]. <https://chat.openai.com/chat> -<https://creating-new-dimensions.org/Herbarium/>

Chapter 4

Flora Unveiled: Exploring the Diverse Plant Collections of Berlin's Botanical Garden and Museum

Title: *Bravaisia berlandieriana*

KeyError: 'item'

Chapter 5

pip install sparqlwrapper

```
# https://rdflib.github.io/sparqlwrapper/

import sys
from SPARQLWrapper import SPARQLWrapper, JSON

endpoint_url = "https://query.wikidata.org/sparql"

query = """#defaultView:ImageGrid
SELECT DISTINCT ?item ?itemLabel ?Bild ?taxon_rang ?taxon_rangLabel ?übergeordnetes_Taxon ?übergeordnetes_TaxonLabel
?item wdt:P31 wd:Q16521;
      wdt:P195 wd:Q119251813;
      wdt:P18 ?Bild.
OPTIONAL {
  ?item wdt:P171 ?übergeordnetes_Taxon;
        wdt:P105 ?taxon_rang;
        wdt:P141 ?Gefährdungsstufe__IUCN__;
        wdt:P973 ?described_at_URL;
        p:P973 ?statement.
  ?statement ps:P973 ?described_at_URL;
            pq:P407 ?language.
}
FILTER(?language != wd:Q102114802)
SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],de". }
}
LIMIT 9"""

def get_results(endpoint_url, query):
```

```
user_agent = "WDQS-example Python/%s.%s" % (sys.version_info[0], sys.version_info[1])
# TODO adjust user agent; see https://w.wiki/CX6
sparql = SPARQLWrapper(endpoint_url, agent=user_agent)
sparql.setQuery(query)
sparql.setReturnFormat(JSON)
return sparql.query().convert()
```

```
results = get_results(endpoint_url, query)
```

```
for result in results["results"]["bindings"]:
    print(result)
```

```
{'painting': {'type': 'uri', 'value': 'http://www.wikidata.org/entity/Q18689477'}, 'cr
{'painting': {'type': 'uri', 'value': 'http://www.wikidata.org/entity/Q18688179'}, 'cr
{'painting': {'type': 'uri', 'value': 'http://www.wikidata.org/entity/Q18688178'}, 'cr
{'painting': {'type': 'uri', 'value': 'http://www.wikidata.org/entity/Q18688360'}, 'cr
{'painting': {'type': 'uri', 'value': 'http://www.wikidata.org/entity/Q18689478'}, 'cr
{'painting': {'type': 'uri', 'value': 'http://www.wikidata.org/entity/Q18688308'}, 'cr
{'painting': {'type': 'uri', 'value': 'http://www.wikidata.org/entity/Q18688310'}, 'cr
{'painting': {'type': 'uri', 'value': 'http://www.wikidata.org/entity/Q19883652'}, 'cr
{'painting': {'type': 'uri', 'value': 'http://www.wikidata.org/entity/Q19915165'}, 'cr
```

Custom Collection by Lisa Sommer (July 23): Plant specimens from the Botanical Garden I

The collection Notebook only contains the SPARQL query and needs additional Python add.