

# Linked Open (Collection) Data: the Botany Pilot

# CETAF ISTC “Quality of Service” Workshop, Copenhagen, 19-20 June 2018

....

To develop a demonstrator (“Harmonisation and semantic enrichment of collector names”) showing the potential of Linked Open Collection Data (BGBM, Meise, Copenhagen, Leiden & additional collections).

...



# Example: Search for “Humboldt,A. von”

Herbarium Berolinense  
Virtual Herbarium

Search digital specimens at the Herbarium

The BGBM offers on-line access to 427748 specimen records with 184226 high-resolution holdings.

The Virtual Herbarium Berolinense now offers the online annotation system AnnoSys to specimen") to AnnoSys is given in the top right corner of the specimen page, together v Please use AnnoSys to annotate specimens you work with. For questions or feedback p annosys@bgbm.org.

Detailed Freetext Barcode Loans

Use the asterisk (\*) as a wildcard (e.g. Calend\* will find all names starting with Calend, C subspecies etc. of Calendula officinalis, Ca\*la will find Calendula and \*officina\* will find n. Please note that name searches search both accepted taxa and synonyms.

Family:

Scientific name:

Collector:

Collector number:

Country:

Subcollection:

Types only:

Images only:

Search

Currently, as a rule only basic information is captured in textual form; i.e. the barcode, the s stored, the modern country of origin (where it can be easily deduced), and the original desi

New search [ Previous Page / Next Page ] Hits: 2

JACQ

Stable Identifier: <http://herbarium.bgbm.org/object/B100247301>

Barcode: B 10 0247301


Family: COMMELINACEAE

Storage name: Floscopa glabrata (Kunth) Hassk.  
det. R. B. Faden 1978 1978

Type status: type

Collection: Brazil: Nazaré prope Bahia .  
Leg.: Humboldt,A. von O.

Notes: Ex Reliquiis Sellowianis; Ex herb. Kunth.



JACQ

Stable Identifier: <http://herbarium.bgbm.org/object/B100629230>


Barcode: B 10 0629230

Family: COMMELINACEAE

Storage name: Floscopa glabrata (Kunth) Hassk.  
det. C. B. Clarke

Collection: Brazil: Brasilia meridionalis . 1836,  
Leg.: Humboldt,A. von 5767.

Notes: Ex Reliquiis Sellowianis; Ex herb. Kunth.



# Example: Search for “Humboldt,A. von”

Botanical Collections

Home Search Links

CLEAR FILTERS

Q Humboldt,A. von

Name Collector Collector number

No results found.

Family

Q Search...

No items

Ger Home

Spe

Ima

Royal Botanic Garden Edinburgh Herbarium catalogue

No records found with collector = Humboldt,A. von

New query Edit query

No matches

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## Steps for linking collector data:

- **Validation of BGBM top 1000 collectors against: Index of Botanists, VIAF, Wikidata, ORCID**
- **Adding identifier to collector table**



# OpenRefine-based platform

1063 matching rows (12421 total)

Show as: rows records Show: 5 10 25 50 rows

« first

▼ Rang	▼ Sammler	▼ HUH_Lookup	▼ SammlerteamID	▼ StableURI	▼ HUH_ID	▼ HUH_PURL	▼ VIAF_ID	▼ WIKIDATA_ID
1	G. W. H. Kunkel	<a href="http://kiki.huh.harvard.edu/databases/botanist_search.php?start=1&amp;id=&amp;remarks=&amp;specialty=&amp;country=&amp;individual=on&amp;name=G.+W.+H.+Kunkel">http://kiki.huh.harvard.edu/databases/botanist_search.php?start=1&amp;id=&amp;remarks=&amp;specialty=&amp;country=&amp;individual=on&amp;name=G.+W.+H.+Kunkel</a>	21026	<a href="http://herbarium.bgbm.org/object/B100533578">http://herbarium.bgbm.org/object/B100533578</a>	<a href="http://purl.oclc.org/net/edu.harvard.huh/guid/uid/7e7ed362-087a-4f05-8d2e-fbcc413931b4">http://purl.oclc.org/net/edu.harvard.huh/guid/uid/7e7ed362-087a-4f05-8d2e-fbcc413931b4</a>	<a href="http://purl.oclc.org/net/edu.harvard.huh/guid/uid/7e7ed362-087a-4f05-8d2e-fbcc413931b4">http://purl.oclc.org/net/edu.harvard.huh/guid/uid/7e7ed362-087a-4f05-8d2e-fbcc413931b4</a>	<a href="http://viaf.org/viaf/2552986">http://viaf.org/viaf/2552986</a>	<a href="https://www.wikidata.org/wiki/Q3124605">https://www.wikidata.org/wiki/Q3124605</a>
5	A. J. A. Bonpland	<a href="http://kiki.huh.harvard.edu/databases/botanist_search.php?start=1&amp;id=&amp;remarks=&amp;specialty=&amp;country=&amp;individual=on&amp;name=A.+J.+A.+Bonpland">http://kiki.huh.harvard.edu/databases/botanist_search.php?start=1&amp;id=&amp;remarks=&amp;specialty=&amp;country=&amp;individual=on&amp;name=A.+J.+A.+Bonpland</a>	13081	<a href="http://herbarium.bgbm.org/object/BW00400010">http://herbarium.bgbm.org/object/BW00400010</a>	<a href="http://kiki.huh.harvard.edu/databases/botanist_search.php?mode=details&amp;id=851">http://kiki.huh.harvard.edu/databases/botanist_search.php?mode=details&amp;id=851</a>	<a href="http://purl.oclc.org/net/edu.harvard.huh/guid/uid/63eb3af2-f07e-4f3c-b860-1c821df6f676">http://purl.oclc.org/net/edu.harvard.huh/guid/uid/63eb3af2-f07e-4f3c-b860-1c821df6f676</a>	<a href="http://viaf.org/viaf/51750221/#Bonpland,_Aim%C3%A9,_1773-1858.">http://viaf.org/viaf/51750221/#Bonpland,_Aim%C3%A9,_1773-1858.</a>	<a href="https://www.wikidata.org/wiki/Q405702">https://www.wikidata.org/wiki/Q405702</a>
6	F. W. H. A. von Humboldt	<a href="http://kiki.huh.harvard.edu/databases/botanist_search.php?start=1&amp;id=&amp;remarks=&amp;specialty=&amp;country=&amp;individual=on&amp;name=F.+W.+H.+A.+von+Humboldt">http://kiki.huh.harvard.edu/databases/botanist_search.php?start=1&amp;id=&amp;remarks=&amp;specialty=&amp;country=&amp;individual=on&amp;name=F.+W.+H.+A.+von+Humboldt</a>	13081	<a href="http://herbarium.bgbm.org/object/BW00400010">http://herbarium.bgbm.org/object/BW00400010</a>	<a href="http://kiki.huh.harvard.edu/databases/botanist_search.php?mode=details&amp;id=1813">http://kiki.huh.harvard.edu/databases/botanist_search.php?mode=details&amp;id=1813</a>	<a href="http://purl.oclc.org/net/edu.harvard.huh/guid/uid/fbd6b5d7-4970-40e9-928e-ea1d670f3ba3">http://purl.oclc.org/net/edu.harvard.huh/guid/uid/fbd6b5d7-4970-40e9-928e-ea1d670f3ba3</a>	<a href="http://viaf.org/viaf/95193235/#Humboldt,_Alexander_%CB%9Cvon% C5%93_1769-1859">http://viaf.org/viaf/95193235/#Humboldt,_Alexander_%CB%9Cvon% C5%93_1769-1859</a>	<a href="https://www.wikidata.org/wiki/Q6694">https://www.wikidata.org/wiki/Q6694</a>
9	E. Willing	<a href="http://kiki.huh.harvard.edu/databases/botanist_search.php?start=1&amp;id=&amp;remarks=&amp;specialty=&amp;country=&amp;individual=on&amp;name=E.+Willing">http://kiki.huh.harvard.edu/databases/botanist_search.php?start=1&amp;id=&amp;remarks=&amp;specialty=&amp;country=&amp;individual=on&amp;name=E.+Willing</a>	13993	<a href="http://herbarium.bgbm.org/object/B100001671">http://herbarium.bgbm.org/object/B100001671</a>	<a href="http://kiki.huh.harvard.edu/databases/botanist_search.php?mode=details&amp;id=62713">http://kiki.huh.harvard.edu/databases/botanist_search.php?mode=details&amp;id=62713</a>	<a href="http://purl.oclc.org/net/edu.harvard.huh/guid/uid/c9631c13-a2aa-4ed3-8577-dcd8314b3dd6">http://purl.oclc.org/net/edu.harvard.huh/guid/uid/c9631c13-a2aa-4ed3-8577-dcd8314b3dd6</a>		<a href="https://www.wikidata.org/wiki/Q5817021">https://www.wikidata.org/wiki/Q5817021</a>
10	J. F. N. Benth	<a href="http://kiki.huh.harvard.edu/databases/botanist_search.php?start=1&amp;id=&amp;remarks=&amp;specialty=&amp;country=&amp;individual=on&amp;name=J.+F.+N.+Benth">http://kiki.huh.harvard.edu/databases/botanist_search.php?start=1&amp;id=&amp;remarks=&amp;specialty=&amp;country=&amp;individual=on&amp;name=J.+F.+N.+Benth</a>	19898	<a href="http://herbarium.bgbm.org/object/B100000000">http://herbarium.bgbm.org/object/B100000000</a>	<a href="http://kiki.huh.harvard.edu/databases/botanist_search.php?mode=details&amp;id=100000000">http://kiki.huh.harvard.edu/databases/botanist_search.php?mode=details&amp;id=100000000</a>	<a href="http://purl.oclc.org/net/edu.harvard.huh/guid/uid/73e50e04-4495-4d30-9e55-4b3b3b3b3b3b">http://purl.oclc.org/net/edu.harvard.huh/guid/uid/73e50e04-4495-4d30-9e55-4b3b3b3b3b3b</a>	<a href="https://viaf.org/viaf/20427222/">https://viaf.org/viaf/20427222/</a>	<a href="https://www.wikidata.org/wiki/Q5817021">https://www.wikidata.org/wiki/Q5817021</a>

## **Result (within 1 person week):**

- **735 collectors identified**
- **linking person identifiers for ~ 52.000 specimen in our herbarium**

## **Result within the JACQ system:**

- **linking person identifiers for ~ 300.000 specimen**
- **person identifiers are now useable for 35 herbaria within the JACQ system**

# Steps for linking geographical freetext data:

- **> 400 000 free text entries about location within 3 different columns**
  - **Location (Fundort)**
  - **LocationAndEcology (FundortUndOeko)**
  - **Remarks (Anmerkungen)**
- **Information in various languages: German, English, Spanish, Latin**
- **Additional Information**
  - **ISO Code**
  - **Coordinates**



# OpenRefine-based platform

**OpenRefine Botanical Data** [Permalink](#)

Facet / Filter [Undo / Redo](#) 1935 / 1935

Refresh [Reset All](#) [Remove All](#) Show as: **rows** records Show: 5 10 25 50 rows

**37569 matching rows** (414500 total)

mm	Sammeldatum	Anmerkungen	HerbariumID	StableURI	Co
	2012-06-19	Herbariumnummer in Berlin: B 10 0502749; utm: EJ 69.47.06	B100502749	<a href="http://herbarium.bgbm.org/object/B100502749">http://herbarium.bgbm.org/object/B100502749</a>	2012-0
	2012-06-19	Herbariumnummer in Berlin: B 10 0499603; utm: EJ 69.47.06	B100499603	<a href="http://herbarium.bgbm.org/object/B100499603">http://herbarium.bgbm.org/object/B100499603</a>	2012-0
	2012-06-19	Herbariumnummer in Berlin: B 10 0502748; utm: EJ 69.47.06	B100502748	<a href="http://herbarium.bgbm.org/object/B100502748">http://herbarium.bgbm.org/object/B100502748</a>	2012-0
	2012-06-15	Herbariumnummer in Berlin: B 10 0499611; utm: EK 51.15.43	B100499611	<a href="http://herbarium.bgbm.org/object/B100499611">http://herbarium.bgbm.org/object/B100499611</a>	2012-0
	2012-06-08	Herbariumnummer in Berlin: B 10 0497517; utm: EK 59,86.48	B100497517	<a href="http://herbarium.bgbm.org/object/B100497517">http://herbarium.bgbm.org/object/B100497517</a>	2012-0
	2012-06-05	Herbariumnummer in Berlin: B 10 0493695; utm: EK 69.74.68	B100493695	<a href="http://herbarium.bgbm.org/object/B100493695">http://herbarium.bgbm.org/object/B100493695</a>	2012-0
	2010-05-30	Herbariumnummer in Berlin: B 10 0405038; utm: EH 83.32.93	B100405038	<a href="http://herbarium.bgbm.org/object/B100405038">http://herbarium.bgbm.org/object/B100405038</a>	2010-0
	2010-05-29	Herbariumnummer in Berlin: B 10 0405040; utm: FH 21.25.50	B100405040	<a href="http://herbarium.bgbm.org/object/B100405040">http://herbarium.bgbm.org/object/B100405040</a>	2010-0
	2009-04-28	Herbariumnummer in Berlin: B 10 0201733	B100291733	<a href="http://herbarium.bgbm.org/object/B100291733">http://herbarium.bgbm.org/object/B100291733</a>	2009-0

**Facet / Filter**

- Starred Rows** [change invert reset](#)  
2 choices Sort by: **name** count  
**false** 37569 [exclude](#)  
**true** 136475  
[Facet by choice counts](#)
- Flagged Rows** [change invert reset](#)  
1 choices Sort by: **name** count  
**false** 37569 [exclude](#)  
[Facet by choice counts](#)
- fkIsoCode** [change invert reset](#)  
233 choices Sort by: **name** count [Cluster](#)  
AD 16  
AE 6  
[Facet by choice counts](#)
- Fundort** [change](#)  

5264 choices total, too many to display  
Set choice count limit

  
[Facet by choice counts](#)



# OpenRefine-based platform

## Clustering

**Cluster & Edit column "Fundort"**

This feature helps you find groups of different cell values that might be alternative representations of the same thing. For example, the two strings "New York" and "new york" are very likely to refer to the same concept and just have capitalization differences, and "Gödel" and "Godel" probably refer to the same person. [Find out more...](#)

Method: **key collision**      Keying Function: **cologne-phonetic**      **4760 clusters found**

4	6	<ul style="list-style-type: none"><li>• Sérrai, Sintikis, 1,5 km W Fea Petra (4 rows)</li><li>• Sérrai, Sintikis, 1,2 km N Fea Petra (2 rows)</li><li>• Sérrai, Sintikis, 1,8 km NNO Fea Petra (1 rows)</li></ul>	
4	6	<ul style="list-style-type: none"><li>• Magnisia, Almyrou, 11,6 km SO Almiros (2 rows)</li><li>• Magnisia, Almyrou, 3,4 km SO Almiros (2 rows)</li><li>• Magnisia, Almyrou, 2,8 km SO Almiros (1 rows)</li><li>• Magnisia, Almyrou, 6,8 km SO Almiros (1 rows)</li></ul>	Magnisia, Almyrou, 11,6 km SO A
4	244	<ul style="list-style-type: none"><li>• Kreta (218 rows)</li><li>• Crete (19 rows)</li><li>• Creta (6 rows)</li><li>• Krete (1 rows)</li></ul>	Kreta
4	5	<ul style="list-style-type: none"><li>• Magnisia, Volou, 3,0 km SO Portaria (2 rows)</li><li>• Magnisia, Volou, 2,0 km SO Portaria (1 rows)</li><li>• Magnisia, Volou, 2,6 km SO Portaria (1 rows)</li><li>• Magnisia, Volou, 3,3 km SO Portaria (1 rows)</li></ul>	Magnisia, Volou, 3,0 km SO Porta
4	46	<ul style="list-style-type: none"><li>• cult. Hort. bot. Berol. (43 rows)</li><li>• cult. Hort. bot. Berol., 168-06-85-20 (1 rows)</li><li>• cult. Hort. bot. Berol., 168-07-85-20. (1 rows)</li><li>• cult. Hort. bot. Berol., 313-04-87-20 (1 rows)</li></ul>	cult. Hort. bot. Berol.

**# Choices in Cluster**  
1 — 10

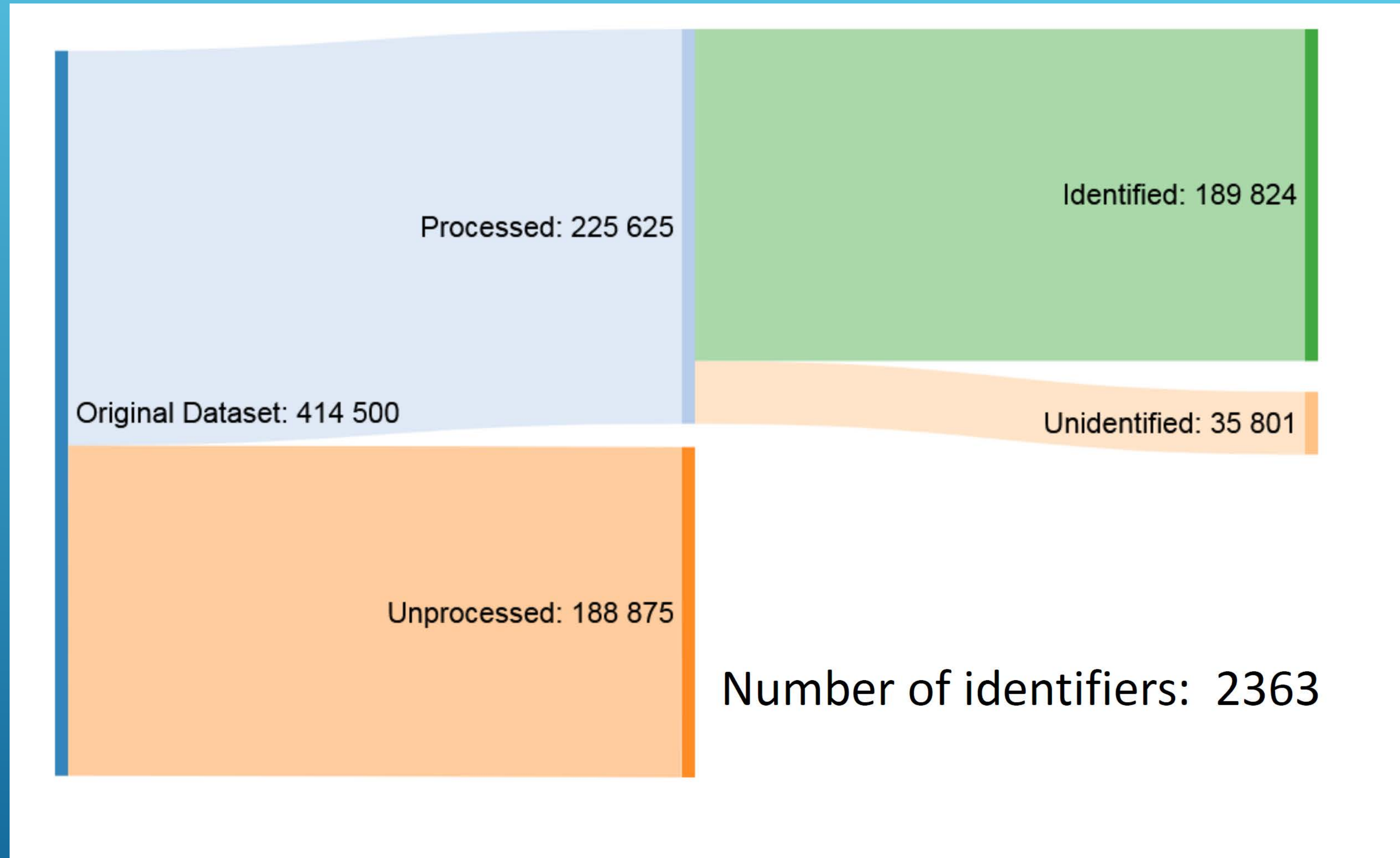
**# Rows in Cluster**  
0 — 340

**Average Length of Choices**  
0 — 230

**Length Variance of Choices**  
0 — 6.5

Select All   Unselect All   Export Clusters   Merge Selected & Re-Cluster   Merge Selected & Close   Close

# Result:





## Steps for linking data:

- Adding identifier to RDF export and portals
- Harvest RDF into RDF store

# BGBM RDF example

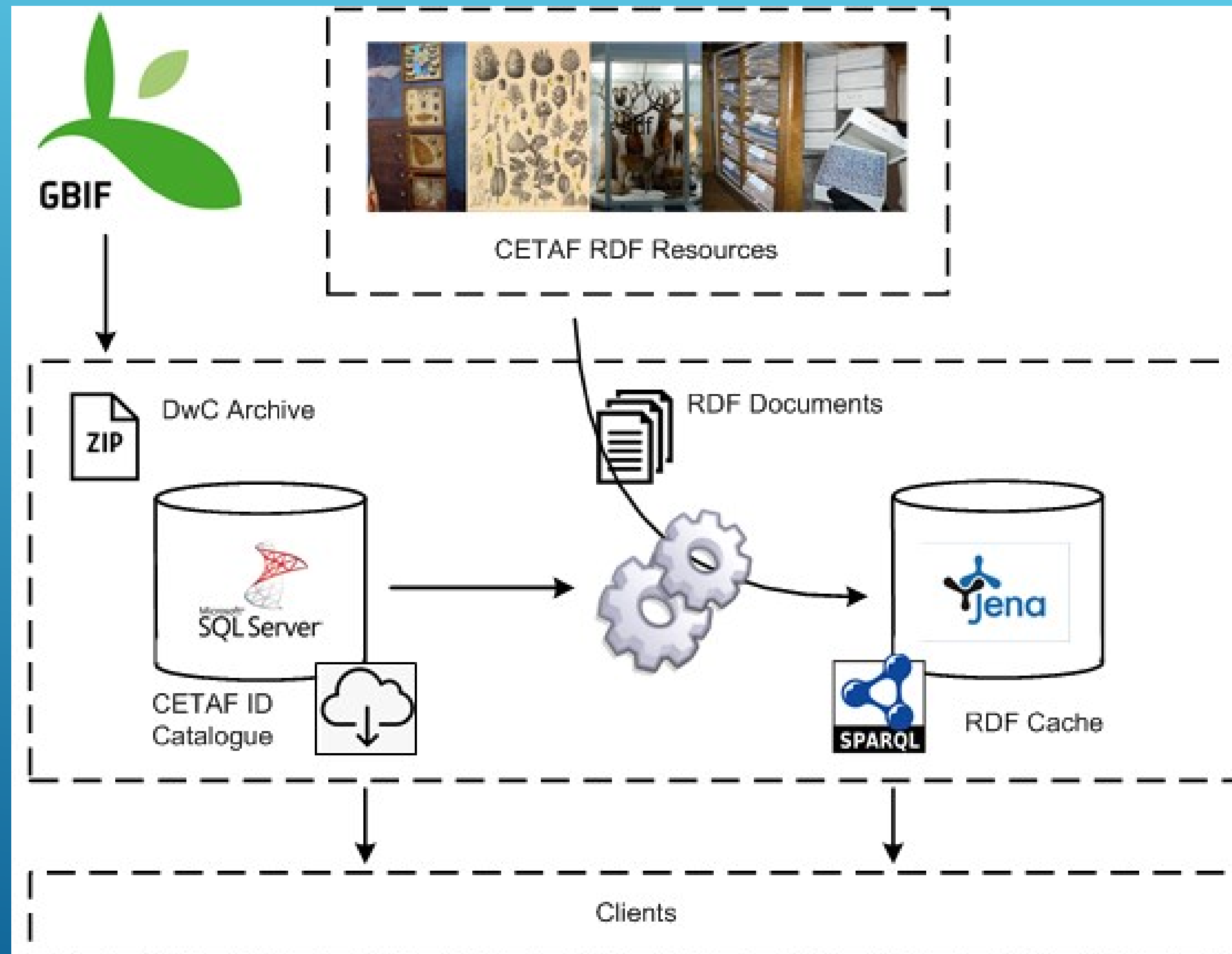
```
--<rdf:RDF>
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:tap="http://rs.tdwg.org/tapir/1.0" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:hyam="http://hyam.net/tapir2sw#"
  <!--This is metadata about this metadata document-->
  <rdf:Description rdf:about="http://herbarium.bgbm.org/data/rdf/B100004210">
    <dc:subject rdf:resource="http://herbarium.bgbm.org/object/B100004210"/>
    <dc:creator>Botanischer Garten und Botanisches Museum Berlin</dc:creator>
    <dc:created>2019-03-11T09:31:40+01:00</dc:created>
  </rdf:Description>
  <!--This is metadata about this specimen-->
  <rdf:Description rdf:about="http://herbarium.bgbm.org/object/B100004210">
    <dc:title>Diaphanathe bidens</dc:title>
    <dc:description>
      A herbarium specimen of Diaphanathe bidens collected by Leeuwenberg,A.J.M.
    </dc:description>
    <dc:creator>Leeuwenberg,A.J.M.</dc:creator>
    <dc:created>1962</dc:created>
    <dc:type>Specimen</dc:type>
    <dc:publisher>BGBM</dc:publisher>
    <dwc:materialSampleID>http://herbarium.bgbm.org/object/B100004210</dwc:materialSampleID>
    <dc:modified>2016-04-04 11:38:32.9630000</dc:modified>
    <dwc:basisOfRecord>Specimen</dwc:basisOfRecord>
    <dwc:collectionCode>B</dwc:collectionCode>
    <dwc:catalogNumber>B 10 0004210</dwc:catalogNumber>
    <dwc:scientificName>Diaphanathe bidens</dwc:scientificName>
    <dwc:previousIdentifications>Diaphanathe bidens</dwc:previousIdentifications>
    <dwc:family>ORCHIDACEAE</dwc:family>
    <dwc:genus>Diaphanathe</dwc:genus>
    <dwc:specificEpithet>bidens</dwc:specificEpithet>
    <dwc:country>Ivory Coast</dwc:country>
    <dwc:countryCode>CI</dwc:countryCode>
    <dwc:locality>
      Ivory Coast: 1962, Leg.: A. J. M. Leeuwenberg 3959.
    </dwc:locality>
    <dwc:eventDate>1962</dwc:eventDate>
    <dwc:recordNumber>3959</dwc:recordNumber>
    <dwc:fieldNumber>3959</dwc:fieldNumber>
    <dwc:recordedBy>Leeuwenberg,A.J.M.</dwc:recordedBy>
    <dwciri:recordedBy rdf:resource="https://www.wikidata.org/wiki/Q4260321"/>
    <dwc:associatedMedia rdf:resource="http://ww2.bgbm.org/herbarium/images/B/10/00/04/21/B_10_0004210.jpg"/>
  </rdf:Description>
  <rdf:Description rdf:about="https://www.wikidata.org/wiki/Q4260321">
    <owl:sameAs rdf:resource="http://viaf.org/viaf/36006395"/>
    <owl:sameAs rdf:resource="http://purl.oclc.org/net/edu.harvard.huh/guid/uuid/dc180d79-3820-4b00-bf8f-0f287fa660aa"/>
  </rdf:Description>
</rdf:RDF>
```

# Stable Identifiers Implementers

irect	RDF_Compliance	CSPP_Compliance	IDS_Published_To_GBIF	Number_of_GBIF_Records
	no	no	no	10
	yes	yes	yes	380,592
	yes	yes	yes	1,541,180
	yes	yes	no	0 no redirect
	no	no	no	1,197
	yes	no	no	0 redirection
	no	no	no	0
	yes	yes	no	0 redirection
	yes	yes	yes	2,916
	yes	yes	yes	1,440
	yes	yes	yes	9,084
	yes	yes	yes	10,565
	yes	yes	yes	17,055
	yes	yes	yes	12,827
	yes	yes	yes	14,978
	yes	yes	yes	11,738
	yes	yes	yes	366,576
	yes	yes	yes	13,382
	yes	yes	yes	135,103
	yes	yes	yes	45,288
	yes	yes	yes	24,690
	yes	yes	yes	201,587
	yes	yes	yes	34,723
	yes	yes	yes	8,887
	yes	yes	yes	77,123
	yes	yes	yes	9,997
	yes	yes	yes	5,464,719
	yes	yes	yes	469,898
	yes	yes	yes	202,548
	yes	yes	yes	852
	yes	yes	yes	1,699
	yes	yes	yes	89,309
	yes	yes	yes	39,294
	no	no	no	2 redirection
	yes	yes	yes	7,880,630 redirection
	yes	yes	yes	903,683



# Data for the demonstrator








































# Person identifier within the JACQ portal:

**JACQ**

[BGBMHOME](#)   [DATABASE](#)   [COLLECTIONS](#)   [REFERENCE SYSTEMS](#)

9 records found   [DOWNLOAD KML](#)   [DOWNLOAD CSV](#)   [View !\[\]\(2f7832303e981a371352298931979d24\_img.jpg\) images](#)

Items per Page: 50   < 1 >

Taxon	Collector	Date	Location	Typus	Collection Herb.#	Lat/Lon
<a href="#">Andropogon hirtus L.</a>	  <a href="#">Renvoize,S.A.</a> s.n.	1968-07-25	 South Africa		W 1889-0144301	
 <a href="#">Calea pinheiroi H. Rob.</a>	  <a href="#">Harley,R.M.</a> et al. 17020	1974-03-08	 Brazil. Bahia	ph-HT	W 1981-0002329	
 <a href="#">Cortaderia bifida Pilg.</a>	  <a href="#">Renvoize</a> 4353	15.7.1982	 Peru. Junín		B 10 0217559	
 <a href="#">Cortaderia bifida Pilg.</a>	  <a href="#">Renvoize</a> 4353	15.7.1982	 Peru. Junín		B 10 0217560	
<a href="#">Dichrostachys microcephala Renvoize</a>	  <a href="#">Renvoize,S.A.</a> 1059	1968-02-16	 Seychelles		FT 001356	
 <a href="#">Eragrostis decumbens Renvoize</a>	  <a href="#">Renvoize,S.A.</a> 806	1968-01-18	 Seychelles	IT	W 1972-0013278	
 <a href="#">Eragrostis subaequiglumis Renvoize</a>	  <a href="#">Renvoize,S.A.</a> 1039	1968-02-15	 Seychelles	IT	W 1972-0013299	
 <a href="#">Panicum aldabrense Renvoize</a>	  <a href="#">Renvoize,S.A.</a> 1325	1968-03-15	 Seychelles	IT	W 1972-0013295	
 <a href="#">Sporobolus testudinum Renvoize</a>	  <a href="#">Renvoize,S.A.</a> 972	1968-02-07	 Seychelles	IT	W 1972-0013283	

# Person identifier within the JACQ portal:




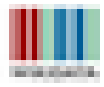





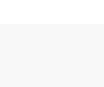
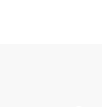
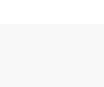




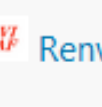



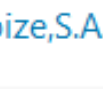

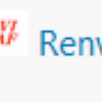




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9 records found   [DOWNLOAD KML](#)   [DOWNLOAD CSV](#)   [View images](#)

Items per Page: 50   < 1 >

Taxon	Image	Person	Collection Herb.#	Typus	Lat/Lon
Andropogon hirtus L.	  	Renvoize 4353	W 1889-0144301		
Calea pinheiroi H. Rob.	  	Renvoize,S.A. 1059	W 1981-0002329	ph-HT	
Cortaderia bifida Pilg.	  	Renvoize,S.A. 1059	B 10 0217559		M
Cortaderia bifida Pilg.	  	Renvoize,S.A. 1059	B 10 0217560		
Dichrostachys microcephala Renvoize	  	Renvoize,S.A. 1059	1968-02-16	Seychelles	FT 001356
Eragrostis decumbens Renvoize	  	Renvoize,S.A. 806	1968-01-18	Seychelles	IT W 1972-0013278 M
Eragrostis subaequiglumis Renvoize	  	Renvoize,S.A. 1039	1968-02-15	Seychelles	IT W 1972-0013299 M
Panicum aldabrense Renvoize	  	Renvoize,S.A. 1325	1968-03-15	Seychelles	IT W 1972-0013295
Sporobolus testudinum Renvoize	  	Renvoize,S.A. 972	1968-02-07	Seychelles	IT W 1972-0013283





Stephen Andrew Renvoize  
 \* 1944 †  
 botanist  
 Renvoize



prefLabels:

- S. A. Renvoize@no-NO
- S. A. Renvoize@fr-FR
- S. A. Renvoize@en-US
- S.A. Renvoize@de-DE
- S.A. Renvoize@nl-NL

sameAsList:

- <http://data.bnf.fr/ark:/12148/cb12386576p#foaf:Person>
- <http://data.bibsys.no/data/notrbib/authorityentry/x90196490>
- <http://www.idref.fr/083761969/id>
- <http://id.loc.gov/authorities/names/n80101281>
- <http://www.wikidata.org/entity/Q6134152>
- <http://d-nb.info/gnd/1089412975>
- <http://isni.org/isni/0000000066472191>

#### Identifier from BGBM

- <http://herbarium.bgbm.org/object/B100003274>
- <http://herbarium.bgbm.org/object/B100176888>
- <http://herbarium.bgbm.org/object/B100176904>
- <http://herbarium.bgbm.org/object/B100005465>
- <http://herbarium.bgbm.org/object/B100146524>
- <http://herbarium.bgbm.org/object/B180002751>
- <http://herbarium.bgbm.org/object/B100375238>
- <http://herbarium.bgbm.org/object/B100272782>
- <http://herbarium.bgbm.org/object/B100217559>
- <http://herbarium.bgbm.org/object/B100217560>




#### Identifier from Meise

- <https://www.botanicalcollections.be/specimen/BR0000005068401>
- <https://www.botanicalcollections.be/specimen/BR0000005068463>
- <https://www.botanicalcollections.be/specimen/BR0000006252243>
- <https://www.botanicalcollections.be/specimen/BR00000013428846>
- <https://www.botanicalcollections.be/specimen/BR00000013732547>
- <https://www.botanicalcollections.be/specimen/BR00000013732554>
- <https://www.botanicalcollections.be/specimen/BR00000013787943>
- <https://www.botanicalcollections.be/specimen/BR00000013834708>
- <https://www.botanicalcollections.be/specimen/BR00000013834715>
- <https://www.botanicalcollections.be/specimen/BR00000013834722>


# Person identifier within the JACQ portal:


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**Mary Strong Clemens**  
\* 1873 † 1968  
American botanist  
*Clemens, Mary Knapp Strong, M. S. Clemens, Mrs Joseph Clemens, M. Strong, Mary Knapp Clemens, Mary S. Clemens, Mary Knapp Strong Clemens, Mary K.S. Clemens, Mrs J. Clemens, Mrs Jos. Clemens, Clemens, M.S.*






- o Plant lists : Borneo and New Guinea,
- o Plants collected by Mrs. Joseph Clemens at Fort Sill, Comanche Co., Okla., April-Aug. 1916.
- o Plants from North Borneo
- o Clemens - New Guinea
- o Clemens New Guinea Plants, Arnold Arboretum Herbarium
- o Published Determinations of the Clemens Papua Coll.
- o A List of Determinations of the Clemens Sattelberg and Saruwaged Collections
- o Gramineae from Northeast New Guinea
- o Identifications [No. 211-41835]
- o Determinations of Clemens New Guinea Carices

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Scientific Name	Country	Institution	Date
<a href="#">Dicksonia grandis</a>	Papua New Guinea	MICH	04-19-1940
<a href="#">Dicranopteris linearis subsp. subspeciosa</a>	Malaysia	MICH	10-28-1915
<a href="#">Lygodium auriculatum</a>	Philippines	MICH	07-1907
<a href="#">Lygodium circinnatum</a>	Papua New Guinea	MICH	08-01-1939
<a href="#">Lygodium flexuosum</a>	Indonesia	MICH	10-18-1915
<a href="#">Holochlamys beccarii</a>	Papua New Guinea	MICH	01-25-1940
<a href="#">Gymnostachys anceps</a>	Australia	MICH	09-21-1943
<a href="#">Dicksonia grandis</a>	Papua New Guinea	MICH	06-27-1941
<a href="#">Holochlamys beccarii</a>	Papua New Guinea	MICH	02-1940
<a href="#">Gymnostachys anceps</a>	Australia	MICH	03-1947

[More...](#)



prefLabels:


- o

sameAsList:

- o <http://www.wikidata.org/entity/Q6780787>
- o [http://dbpedia.org/resource/Mary\\_Strong\\_Clemens](http://dbpedia.org/resource/Mary_Strong_Clemens)

### Identifier from BGBM

<http://herbarium.bgbm.org/object/B100000710>  
<http://herbarium.bgbm.org/object/B100000806>  
<http://herbarium.bgbm.org/object/B100160308>  
<http://herbarium.bgbm.org/object/B100160309>  
<http://herbarium.bgbm.org/object/B100160310>  
<http://herbarium.bgbm.org/object/B100160311>  
<http://herbarium.bgbm.org/object/B100160341>  
<http://herbarium.bgbm.org/object/B100160342>  
<http://herbarium.bgbm.org/object/B100160343>  
<http://herbarium.bgbm.org/object/B100160354>



### Identifier from Meise

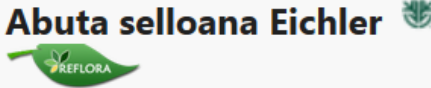

<https://www.botanicalcollections.be/specimen/BR0000005170517>  
<https://www.botanicalcollections.be/specimen/BR0000005739400>  
<https://www.botanicalcollections.be/specimen/BR0000005862047>  
<https://www.botanicalcollections.be/specimen/BR0000006243081>  
<https://www.botanicalcollections.be/specimen/BR0000006243265>  
<https://www.botanicalcollections.be/specimen/BR0000006243319>  
<https://www.botanicalcollections.be/specimen/BR0000006243326>  
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<https://www.botanicalcollections.be/specimen/BR0000006245306>  
<https://www.botanicalcollections.be/specimen/BR0000006245337>






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Stable identifier	<a href="http://herbarium.bgbm.org/object/B100248754">http://herbarium.bgbm.org/object/B100248754</a>
Collection Herb.#	<b>B 10 0248754</b>
Stored under taxonname	<b>Abuta selloana Eichler</b> 
Family	<b>Menispermaceae</b>
Det./rev./conf./assigned	
Ident. history	<b>orig.: Abuta selloana Eichler; Abuta selloana Eichler</b>
Collector	 <b>Sellow, F.</b>
Date	
Location	<b>Brazil</b> Reference in: <a href="#">Geonames</a> ;
Label	
Annotations	

**Abuta selloana Eichler** 



- **By adding an identifier to a string it is possible to link collection data more easily**
- **Specimen data from an institution can be incorporated into the catalogue, if:**
  - **it is published as RDF documents using the CETAF Specimen Preview Profile (CSPP), and**
  - **the CETAF ID is published to GBIF as a GUID (occurrence ID).**