



OXLOD Open Workshop

9 Jan 2018 - OeRC

12.30:

Introduction – Jon Ray

Project update – Athanasios Velios

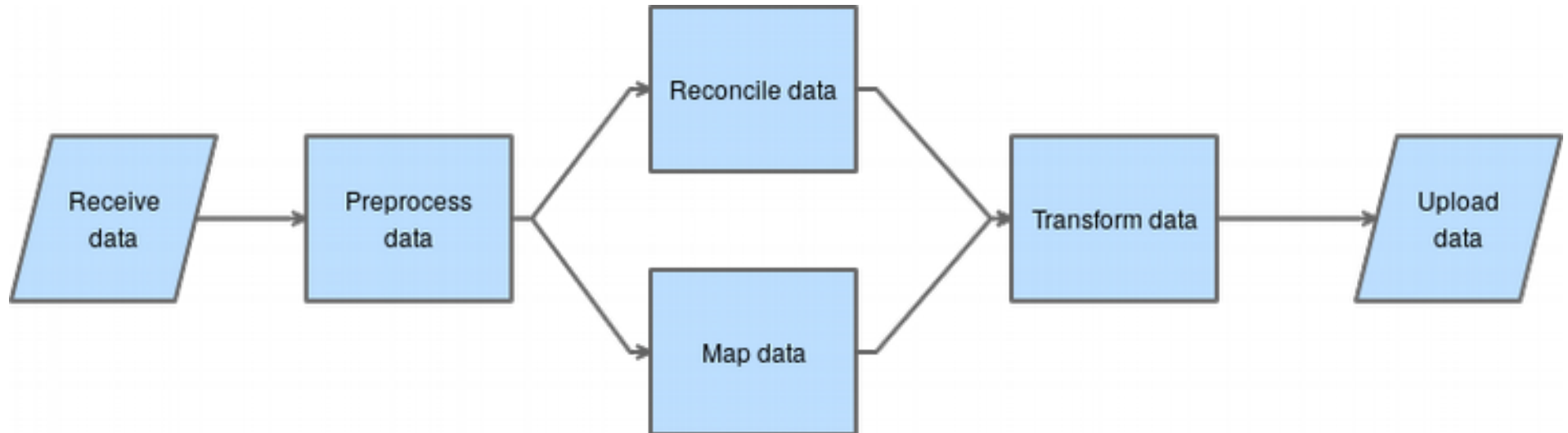
EMu at MHS – Stephen Johnston

Fossils at MNH – Sarah Joomun

Analysis and plans for next month – Athanasios Velios



Workflow





Mapping : St. Catherine's Printed Books

[Info](#)
[Matching Table](#)
[Generators](#)
[Analysis](#)
[Transformation](#)
[Configuration](#)
[About](#)
[TOP](#)
[BOTTOM](#)
[VIEW MODE](#)
[XML](#)

(ALL) SOURCES **

(ALL) TARGETS **

(ALL) IF RULES **

(ALL) COMMENTS **

(ALL) MAPS ⚙

Click on a row to edit the matching table

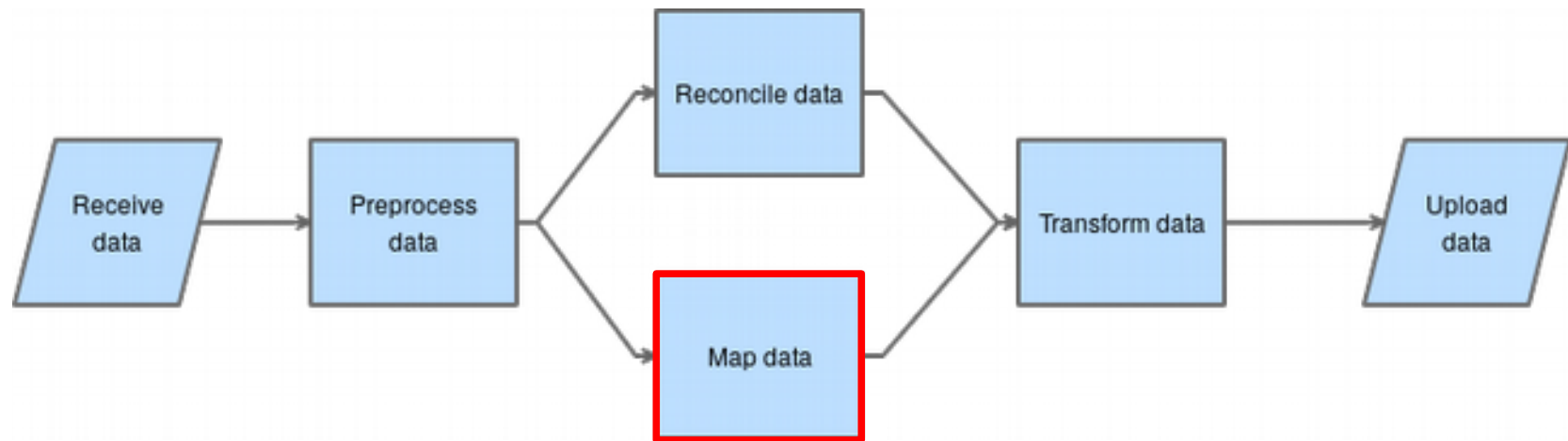
| # | SOURCE | TARGET | CONSTANT EXPRESSION | IF RULE | COMMENTS |
|------|---|--|---------------------|---------|----------|
| 1 | D <input type="checkbox"/> ..book | <input type="checkbox"/> E22_Man-Made_Object | | | |
| 1.1 | P <input type="checkbox"/> ..shelfmark | <input type="checkbox"/> P48_has_preferred_identifier | | | |
| | R <input type="checkbox"/> ..shelfmark | <input type="checkbox"/> E42_Identifier | | | |
| 1.2 | P <input type="checkbox"/> ..title | <input type="checkbox"/> P102_has_title | | | |
| | R <input type="checkbox"/> ..title | <input type="checkbox"/> E35_Title | | | |
| 1.3 | P <input type="checkbox"/> ..author | <input type="checkbox"/> P128_carries <input type="checkbox"/> E73_Information_Object [edition] <input type="checkbox"/> P146_was_created_by <input type="checkbox"/> E65_Creation [edition-creation] <input type="checkbox"/> P11_had_participant | | | |
| | R <input type="checkbox"/> ..author | <input type="checkbox"/> E21_Person | | | |
| 1.4 | P <input type="checkbox"/> ..placeOfPrinting | <input type="checkbox"/> P108_was_produced_by <input type="checkbox"/> E12_Production [book-production] <input type="checkbox"/> P7_took_place_at | | | |
| | R <input type="checkbox"/> ..placeOfPrinting | <input type="checkbox"/> E53_Place | | | |
| 1.5 | P <input type="checkbox"/> ..height | <input type="checkbox"/> P43_has_dimension <input type="checkbox"/> E54_Dimension [P12_has_type] [P91_has_unit] [E55_Type = "height"] [E58_Measurement_Unit = "mm"] <input type="checkbox"/> P90_has_value | | | |
| | R <input type="checkbox"/> ..height | <input type="checkbox"/> rd-schemaLiteral | | | |
| 1.6 | P <input type="checkbox"/> ..numberOfLeaves | <input type="checkbox"/> P43_has_dimension <input type="checkbox"/> E54_Dimension [P12_has_type] [P91_has_unit] [constConcept = "number of leaves"] [E58_Measurement_Unit = "leaves"] <input type="checkbox"/> P90_has_value | | | |
| | R <input type="checkbox"/> ..numberOfLeaves | <input type="checkbox"/> rd-schemaLiteral | | | |
| 1.7 | P <input type="checkbox"/> ..bookSeller | <input type="checkbox"/> P301_custody_transferred_through <input type="checkbox"/> E10_Transfer_of_Custody <input type="checkbox"/> P28_custody_surrendered_by | | | |
| | R <input type="checkbox"/> ..bookSeller | <input type="checkbox"/> E39_Actor | | | |
| 1.8 | P <input type="checkbox"/> ..editionNo | <input type="checkbox"/> P128_carries | | | |
| | R <input type="checkbox"/> ..editionMaterials | <input type="checkbox"/> E73_Information_Object [edition] | | | |
| 1.9 | P <input type="checkbox"/> ..editionNumber | <input type="checkbox"/> P1_is_identified_by | | | |
| | R <input type="checkbox"/> ..editionNumber | <input type="checkbox"/> E42_Identifier | | | |
| 1.10 | P <input type="checkbox"/> ..dateOfPrinting | <input type="checkbox"/> P46_is_composed_of <input type="checkbox"/> E22_Man-Made_Object <input type="checkbox"/> P108_was_produced_by <input type="checkbox"/> E12_Production [textblock-production] <input type="checkbox"/> P4_has_time-span | | | |
| | R <input type="checkbox"/> ..dateOfPrinting | <input type="checkbox"/> E52_Time-Span | | | |
| 1.11 | P <input type="checkbox"/> ..hollowBack | <input type="checkbox"/> P56_bears_feature | | | |
| | R <input type="checkbox"/> ..hollowBack | <input type="checkbox"/> E25_Man-Made_Feature | | | |
| 1.12 | P <input type="checkbox"/> ..left | <input type="checkbox"/> P46_is_composed_of | | | |
| | R <input type="checkbox"/> ..left | <input type="checkbox"/> E22_Man-Made_Object | | | |
| 1.13 | P <input type="checkbox"/> ..right | <input type="checkbox"/> P46_is_composed_of | | | |
| | R <input type="checkbox"/> ..right | <input type="checkbox"/> E22_Man-Made_Object | | | |

+ Link

+ Map

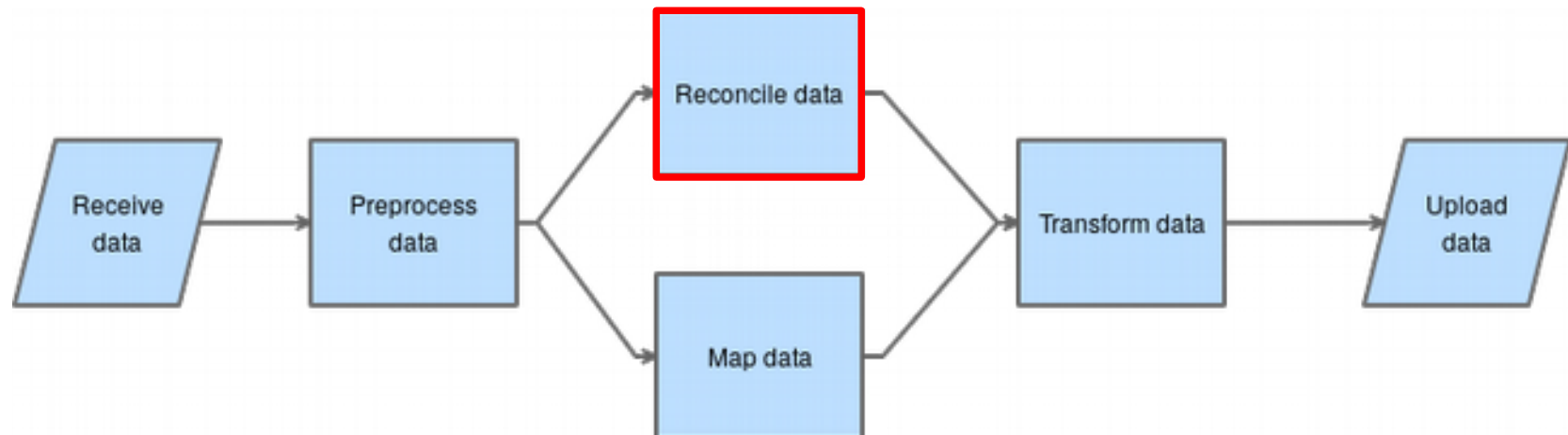
Progress update

- Producing the prototypical record
 - XPath with placeholders
 - A few real records



Progress update

- Reconciliation
 - Essential for integration



Allegro

```
<row>
  <f000>19920204/18:20:03|odh</f000>
  <f0rr>19920206/16:52:01|odh</f0rr>
  <f3AA>李直方</f3AA>
  <f3AA-9>li zhi fang</f3AA-9>
  <f3AR>Lee, Chik Fong</f3AR>
</row>
```

VIAF

 100 1 _ [Li, Chih-fang](#)

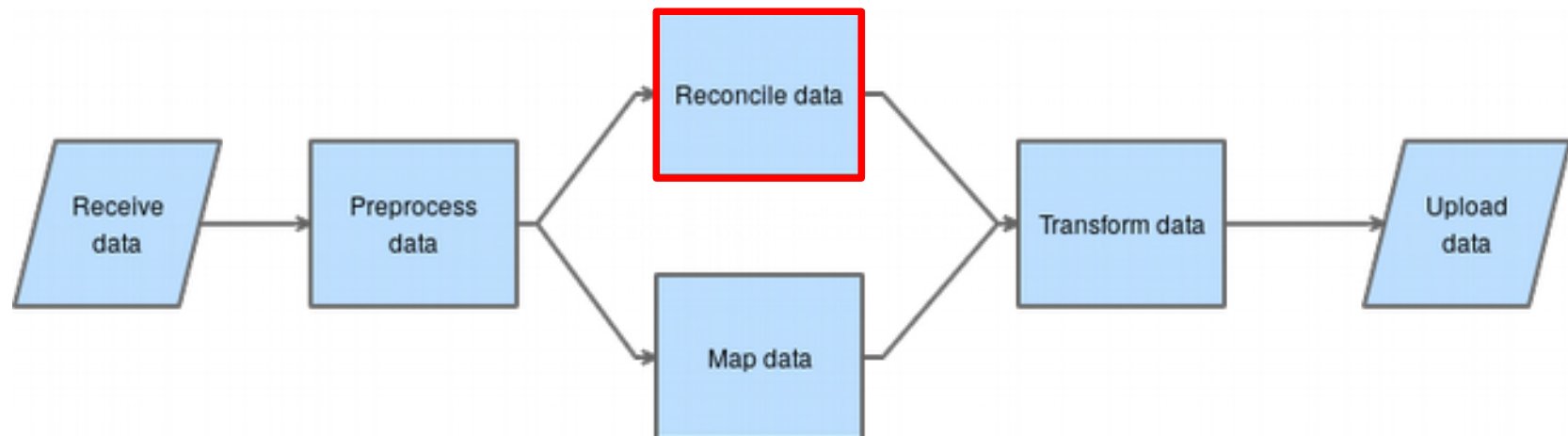
 100 1 _ [Li, Chih-fang](#)

 100 1 _ [Li, Zhifang](#)

 100 0 _ [Li, Zhifang](#)

Progress update

- Reconciliation
 - Essential for integration
 - Automatic reconciliation is poor



Map

Satellite

Layers



1835



England 70 m



P PPL populated place

4110001

91503

United States ^{US} • Arkansas ^{AR} • Lonoke County ⁰⁸⁵ • Township of Gum Woods

population : 2765

34.54426, -91.96903

N 34°32'39" W 91°58'09"



geotree

kml

rdf

1

England

Sonic Drive-In

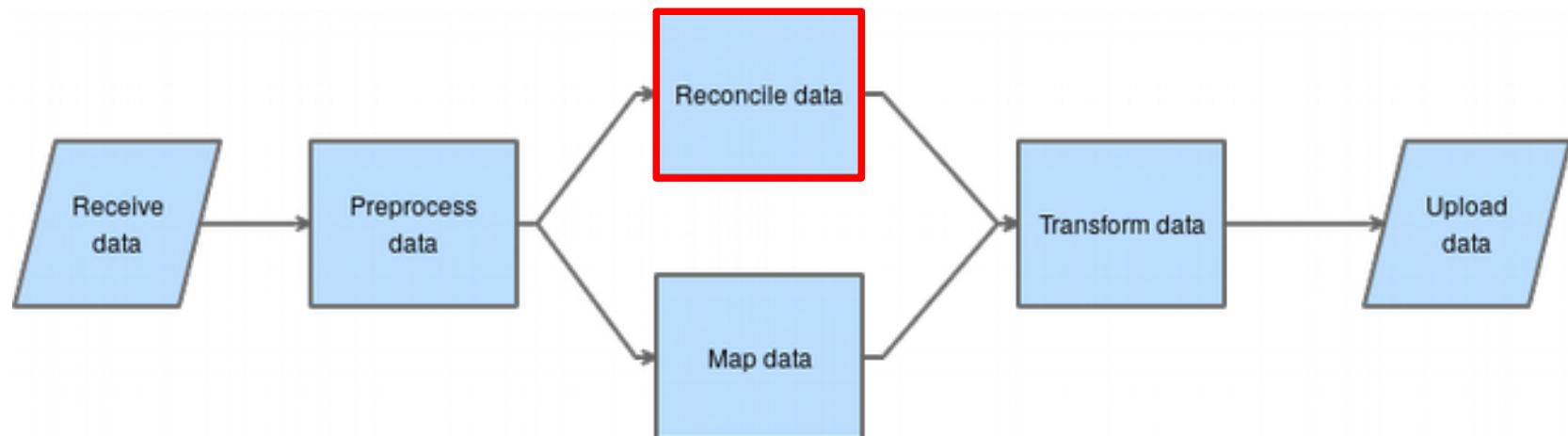
Kroger

England High School

England City Park

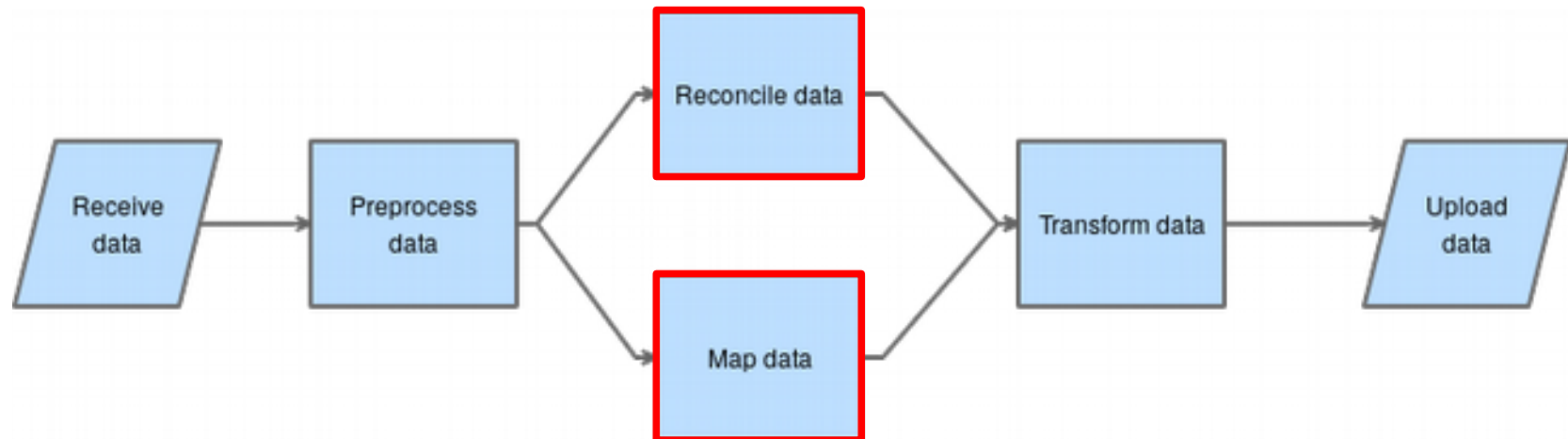
Progress update

- Reconciliation
 - Collections need money for expert input
 - Deploy tools e.g. SALT (Semantic Alignment and Linking Tool)



Progress update

- URIs
 - Millions of them
 - Maintained long-term
 - Institutional guidelines for URIs
 - URIs workshop



Triple store

- Continuing to evaluate software
 - Speed
 - Access control



EMu and linked data at the Museum of Natural History

Sarah Joomun
Digital Collections Manager
Oxford University Museum of Natural History
12 January 2018



Life



Print and Digital



Earth



MNH Collections

Life

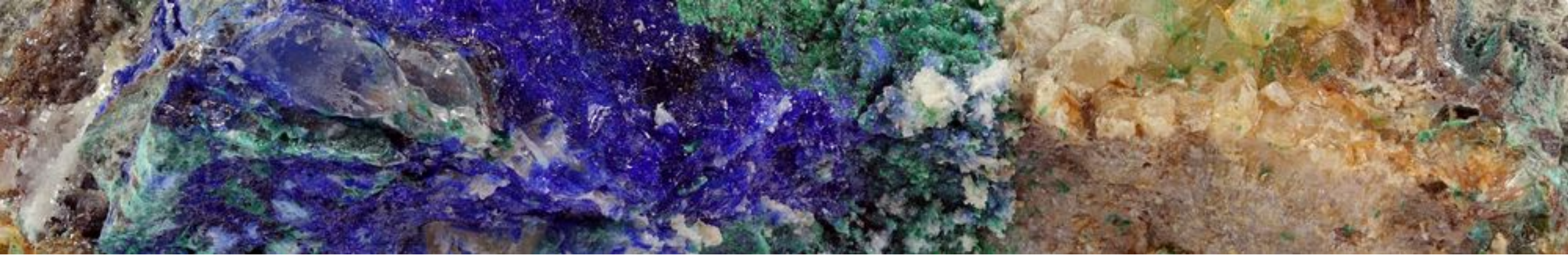
Animals and insects, e.g. pinned insects, skeletons, taxidermy, skins, eggs, shells, spirit collections

Earth

Rocks, minerals, gemstones, meteorites, fossil animals, plants and microscopic organisms

Print and Digital

Library, archives, digital metadata and surrogates, art, other objects, born digital



What are we doing with our data?

- Plan to implement a unified collections management system for scientific collections and archives
- Started to move collections data to new CMS through targeted externally funded projects
- Developed new Collections Online site to provide access to collections data stored in CMS
- Funding from University's IT Capital Fund to move all remaining data to CMS so integrated systems could be developed faster
- More funding from University's IT Capital Fund to expand and redevelop Collections Online in line with new website, user requirements and GLAM digital strategy





Oxford University Museum of Natural History

Collections Online BETA



Scope:

all



enter search term

Search

[Advanced Search](#) | [Help](#)

Explore the Collections

Welcome to our new Collections Online homepage. This is a work in progress and we are constantly adding material. Our goal is to create a single unified database for all the Museum's collections.

At present this database holds the Archives Collection, the butterflies and moths from Life Collections, and the minerals from Earth Collections. Please follow Further Links for access to the rest of our online collections on our main Museum site.



Life



Earth

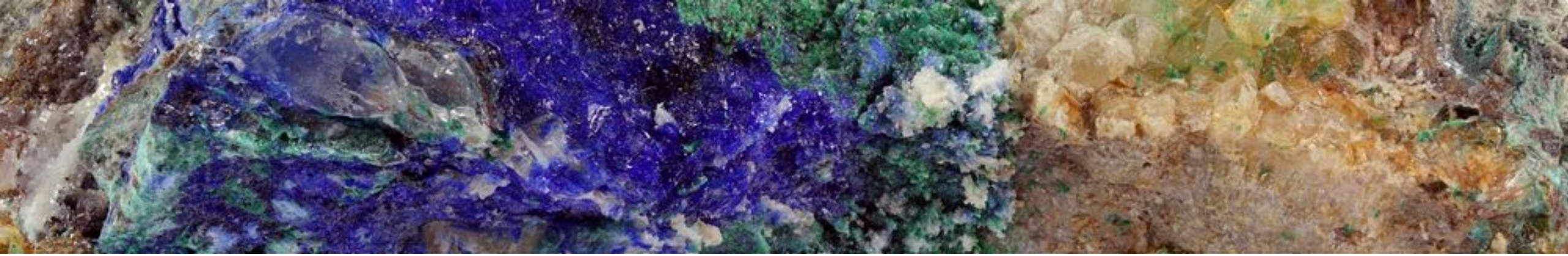


Archives

Featured



Gems of Earth and Air



What are we doing with our data?

- Plan to implement a unified collections management system for scientific collections and archives
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- Funding from University's IT Capital Fund to move all remaining data to CMS so integrated systems could be developed faster
- More funding from University's IT Capital Fund to expand and redevelop Collections Online in line with new website, user requirements and GLAM digital strategy





Why choose EMu for our CMS?

- Used by leading natural history museums
- Integrated management of archive and museum collections
- Ability to customise data structure
- Acts as a digital asset management system
- Excellent support
- Data cleaning tools
- Can import and export data
- Ability to manage authority lists



Museum of
Natural
History
University of Oxford

What does EMu do?

Catalogue

Images

People

Loans

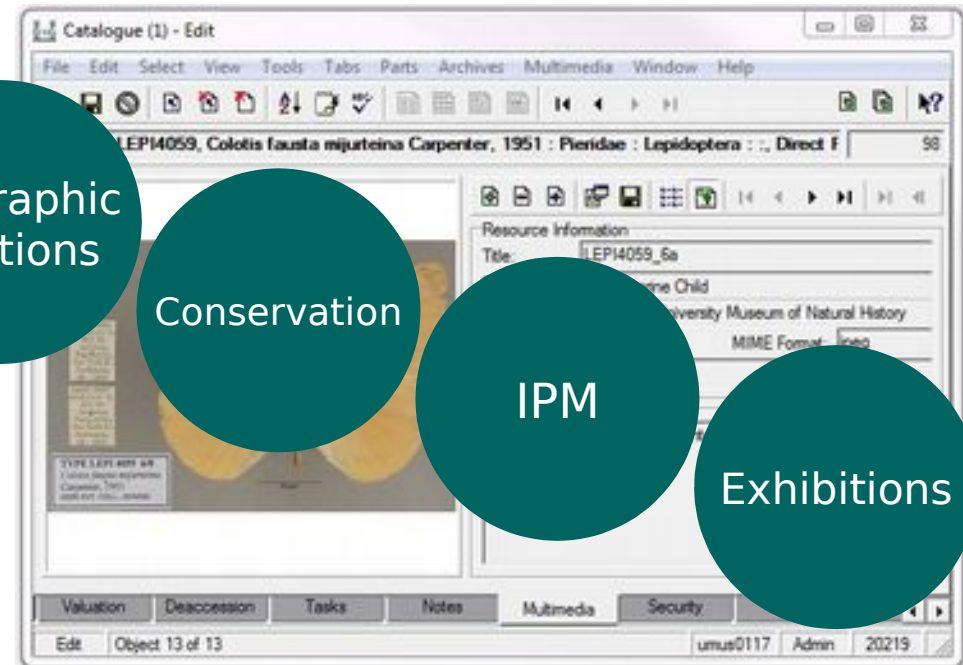
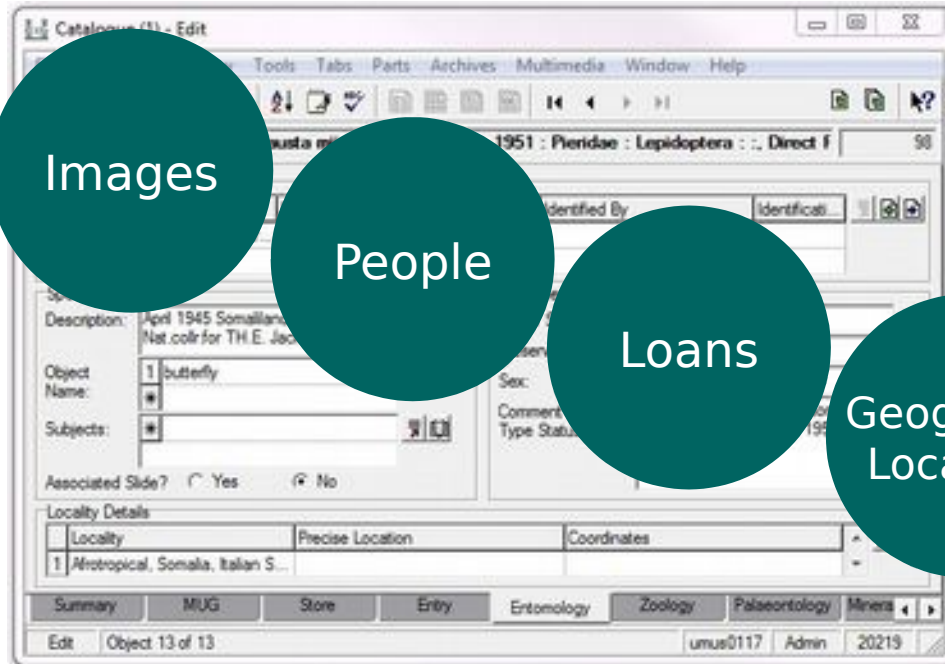
Geographic
Locations

Conservation

IPM

Exhibitions

Web
Content





Why choose EMu for our CMS?

- Used by leading natural history museums
- Integrated management of archive and museum collections
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- Data cleaning tools
- Can import and export data
- Ability to manage authority lists



Data Structure

- EMu can have a flexible or a rigid structure depending on your level of access
- Standard module structure that everyone has e.g. loans, locations, parties, narratives, registry, thesaurus, multimedia
- Standard modules that are specific to subject areas e.g. taxonomy, stratigraphy, sites
- Fully customisable module e.g. catalogue
- Technically everything is customisable but Axiell don't recommend this



Why choose EMu for our CMS?

- Used by leading natural history museums
- Integrated management of archive and museum collections
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- Excellent support
- Data cleaning tools
- Can import and export data
- Ability to manage authority lists



Data Amalgamation Project 2017

What did we do?

- Assessment of 200 data sources
- Amalgamated 65 data sources with 41 different data structures
- Developed new unified data structure
- Mapped fields to new data structure
- Specified changes to software client to support new data structure
- Axiell developed migration scripts
- Tested results of migration scripts and corrected them
- Final data migration of 500,000 catalogue records



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Data Amalgamation Project 2017

Issues

- Significant differences between data structures within and across collections
- Minimal use of controlled terminology
- Idiosyncratic use of external authority data
- Many descriptive fields e.g. transcriptions from historical registers
- Little time for data cleaning and agreeing on standards

Data in EMu

| Catalogue (1) - Display | | | | | | | |
|--------------------------|-------------------------------|------------------------|-----------------------|---------------------|-------------------------|--------------------------------|--|
| Object Number: Coll. | Taxon (Taxonomic Details) | Preservation (Speci... | Physical Descript... | No. of Specimens (S | Locality (Locality Det. | Stratigraphy (Specimen/Str | |
| 1 PAL-A.00001 | Agnostus cyclopyge Tulber | | Complete, but po... | 1 | Whiteleaved Oak, M | Upper Lingula Flags, Merioneth | |
| 2 PAL-A.00002 | Monodocrus punctatus Sabe | | Internal cast of c... | 1 | Denhyd, near Solva... | Menervian Group, St. David's | |
| 3 PAL-A.00004 | Sphaerophthalmus major La | Macrofossil | On same tablet as... | | Malverna, Herefordsh | Merioneth, Upper Lingula Ra | |
| 4 PAL-A.00005 | Sphaerophthalmus major La | Macrofossil | On same tablet as... | | Malverna, Herefordsh | Merioneth, Upper Lingula Ra | |
| 5 PAL-A.00006 | Ctenopyge tentiformis (Angel | | | 1 | Malvern Hills, Heref... | Upper Lingula Flags, Merioneth | |
| 6 PAL-A.00007 | | Other | Transferred to B... | 0 | | | |
| 7 PAL-A.00008 | | Other | Transferred to B... | 0 | | | |
| 8 PAL-A.00009 | Olenus pauper (Phillips, 1837 | Macrofossil | | | Southern Malverna, | | |
| 9 PAL-A.00010 | Baileya lyelli (Hicks, 1871) | Macrofossil | | | Headland near Hun's | | |
| 10 PAL-A.00011 | Paradoides sedgwicki (Hic | Macrofossil | Counterpart of S... | | Headland near Hun's | | |
| 11 PAL-A.00012 | | Other | Transferred to B.6 | 0 | | | |
| 12 PAL-A.00013 | | Other | Transferred to B.7 | 0 | | | |
| 13 PAL-A.00014 | | Other | Transferred to B.5 | 0 | | | |
| 14 PAL-A.00015 | | Other | Transferred to B... | 0 | | | |
| 15 PAL-A.00016 | | Other | Transferred to B... | 0 | | | |
| 16 PAL-A.00016/p | | Other | Transferred to B... | 0 | | | |
| 17 PAL-A.00017 | | Other | Transferred to B... | 0 | | | |
| 18 PAL-A.00018 | | Other | Transferred to B.8 | 0 | | | |
| 19 PAL-A.00019 | | Other | Transferred to B.10 | 0 | | | |
| 20 PAL-A.00020 | | Other | Transferred to B.11 | 0 | | | |
| 21 PAL-A.00021 | Agnostus eskoggei Hicks, 1. | | Natural mould | 1 | St David's, Porthy-R | | |
| 22 PAL-A.00022 | | Other | Transferred to B... | 0 | | | |
| 23 PAL-A.00023 | | Other | Transferred to B... | 0 | | | |
| 24 PAL-A.00024/p | | Other | Transferred to B... | 0 | | | |
| 25 PAL-A.00025 | | Other | Transferred to B... | 0 | | | |
| 26 PAL-A.00026 | | Other | Transferred to B... | 0 | | | |
| 27 PAL-A.00027 | | Other | Transferred to B... | 0 | | | |
| 28 PAL-A.00028 | | Other | Transferred to B... | 0 | | | |
| 29 PAL-A.00029 | | Other | Transferred to B... | 0 | | | |
| 30 PAL-A.00030 | | Other | Transferred to B... | 0 | | | |
| 31 PAL-A.00031 | | Other | Transferred to B... | 0 | | | |
| 32 PAL-A.00032 | | Other | Transferred to B... | 0 | | | |
| 33 PAL-A.00033 | | Other | Transferred to B... | 0 | | | |
| 34 PAL-A.00034-A.0003... | | Other | Transferred to B... | 0 | | | |



Catalogue (1) - Display

File Edit Select View Tools Tabs Parts Archives Multimedia Window Help

PAL-A.00004. Sphaerophthalmus major Lake, 1913. Trilobita. Upper Lingula Flags Formation, Merioneth, England

787257

Identification Details

| Taxon | Preferred | Type Status | Identified By | Identification Date |
|---|-----------|-------------|---------------|---------------------|
| 1 Sphaerophthalmus major Lake, 1913 : Sphaerophthalmus : Psychoporida : Trilobita : Arthropoda : Arme... | | | | |
| 2 Sphaerophthalmus major Lake, 1913 : Sphaerophthalmus : Psychoporida : Trilobita : Arthropoda : Animalia | | Syntype | | |
| 3 Sphaerophthalmus major Lake, 1913 : Sphaerophthalmus : Psychoporida : Trilobita : Arthropoda : Animalia | | Syntype | | |
| 4 Sphaerophthalmus major Lake, 1913 : Sphaerophthalmus : Psychoporida : Trilobita : Arthropoda : Animalia | | Syntype | | |

Specimen Details

No. of Specimens:

Preservation: Macrofossil

Brief Description:

Components:

Object Name: 1 Type

Physical Description: On same tablet as A.5

Locality Details

| Locality | Precise Location | Coordinates |
|--|------------------|-------------|
| 1 Malverna, Herefordshire or Worcestershire, England | | |

Stratigraphic Details

Stratigraphy: Merioneth, Upper Lingula Flags Formation

Summary Paleontology Object History Production Associations Condition Relationships References Subjects Labels/Inscrip. Inscriptions

Display Object 1 of 1

MIME Type: image MIME Format: jpeg

Identifier: A00004-A00005.jpg

Description:

Labels/Inscrip. Inscriptions Core Desc. Parts Location Tasks Notes Multimedia Security Audit Admin

Edit Object 1 of 1

umus0117 Admin 22219

Palaeontology



Support for Authorities in EMu

- Look up lists
- Thesaurus
- Links to data in EMu modules e.g. parties, sites
- Fields for authority links for all records

Catalogue Record

Catalogue (1) - Display

File Edit Select View Tools Tabs Parts Archives Multimedia Window Help

PAL-A.00004. *Sphaerophthalmus major* Lake, 1913. Trilobita. Upper Lingula Flags Formation, Merioneth. England 787257

Identification Details

| Taxon | Preferred | Type Status | Identified By | Identification Date |
|---|-----------|-------------|---------------|---------------------|
| 1 <i>Sphaerophthalmus major</i> Lake, 1913 : <i>Sphaerophthalmus</i> : <i>Ptychoparida</i> : <i>Trilobita</i> : <i>Arthropoda</i> : <i>Animalia</i> | | | | |
| 2 <i>Sphaerophthalmus major</i> Lake, 1913 : <i>Sphaerophthalmus</i> : <i>Ptychoparida</i> : <i>Trilobita</i> : <i>Arthropoda</i> : <i>Animalia</i> | | Syntype | | |
| 3 <i>Sphaerophthalmus major</i> Lake, 1913 : <i>Sphaerophthalmus</i> : <i>Ptychoparida</i> : <i>Trilobita</i> : <i>Arthropoda</i> : <i>Animalia</i> | | Syntype | | |
| 4 <i>Sphaerophthalmus major</i> Lake, 1913 : <i>Sphaerophthalmus</i> : <i>Ptychoparida</i> : <i>Trilobita</i> : <i>Arthropoda</i> : <i>Animalia</i> | | Syntype | | |
| * | | | | |

Specimen Details

No. of Specimens:

Preservation:

Brief Description:

Components:

Object Name:

Physical Description:

Locality Details

| Locality | Precise Location | Coordinates |
|---|------------------|-------------|
| 1 Malvern, Herefordshire or Worcestershire, England | | |
| * | | |

Stratigraphic Details

Stratigraphy:

Summary Palaeontology Object History Production Associations Condition Relationships References Subjects Labels/Inscript. Inscriptions

Display Object 1 of 1 umus0117 Admin 22219

Look up Lists

Lookup Lists (1) - Display

File Edit Select View Tools Tabs Multimedia Window Help

Taxonomy: - Mollusca - Gastropoda - Neogastropoda - Olividae - Oliva - mitreola 82828

Lookup List Name: Taxonomy Persistent: ☒ No ☐ Yes Hidden: ☒ No ☐ Yes Sort Order:

Values

| | |
|----|---------------|
| 1 | |
| 2 | Mollusca |
| 3 | |
| 4 | |
| 5 | Gastropoda |
| 6 | |
| 7 | |
| 8 | Neogastropoda |
| 9 | |
| 10 | |

Lookup 1 Lookup 2 Lookup 3 Lookup 4 Notes Multimedia Security Aux

Display Record 82822 of 191246 umus0117 Admin 22219

Thesaurus

Thesaurus (1) - New

File Edit Select View Tools Tabs Multimedia Window Help

714

Term Details

Status: Acronym:

Term:

Valid Term

☒ Yes

☐ No

Preference Details

Use:

Used For:

Alternates:

Scope Notes

Term Hierarchy History Alerts Notes Multimedia Security Adr

New Term 9 of 714 umus0117 Admin 22219



Support for Authorities in EMu

- Look up lists
- Thesaurus
- Links to data in EMu modules e.g. parties, sites
- Fields for authority links for all records

Data in modules

Biographical
data

Parties (1) - Display

File Edit Select View Tools Tabs Multimedia Window Help

Anning, Mary 3024

Party Type: Person

Person Details

Title: [v]
First: Mary
Middle: [v]
Last: Anning
Suffix: [v]
Other Names: *

Gender
☒ Female ☐ Male ☐ Unknown

Language
Primary: [v]
Dialect: [v]

Derived Names
Automatic: ☒ Yes ☐ No
Salutation: Mary
Full: Mary Anning
Brief: M. Anning
Cited: Anning, Mary
Taxonomic: Anning

Source of Information
[v]

Person Organisation Address Roles Associations Biography Synonymy Ni

Display Party 1 of 1 umus0117 Admin 20219

Parties (1) - Display

File Edit Select View Tools Tabs Multimedia Window Help

Anning, Mary 3024

Birth/Death Details

Date of Birth: 21/05/1799 [v] Earliest: 21/05/1799 Latest: 21/05/1799
Place of Birth: Lyme Regis, Dorset
Date of Death: 09/03/1847 [v] Earliest: 09/03/1847 Latest: 09/03/1847
Place of Death: [v]

Period of Activity
Commenced: [v] Completed: [v]
Notes: Fossil collector and dealer. Full biography may be found in the Oxford Dictionary of Natural Biography.

Heritage
Nationality: [v]
Ethnicity: [v]
Cultural Influences: *

Movement Details

| Location | Start Date | End Date | Notes |
|----------|------------|----------|-------|
| * | | | |

Person Organisation Address Roles Associations Biography Synonymy Ni

Display Party 1 of 1 umus0117 Admin 20219

Fields for authority file links

All records

Parties (1) - Display

File Edit Select View Tools Tabs Multimedia Window Help

Anning, Mary 3024

Party Type: Person

Person Details

Title: []

First: Mary

Middle: []

Last: Anning

Suffix: []

Other Names: *

Gender

☒ Female ☐ Male ☐ Unknown

Language

Primary: []

Dialect: []

Derived Names

Automatic: ☒ Yes ☐ No

Salutation: Mary

Full: Mary Anning

Brief: M. Anning

Cited: Anning, Mary

Taxonomic: Anning

Source of Information

[]

Person Organisation Address Roles Associations Biography Synonymy Ni

Display Party 1 of 1 umus0117 Admin 20219

Parties (1) - Display

File Edit Select View Tools Tabs Multimedia Window Help

Anning, Mary 3024

Legacy Data

Insertion Details

Inserted By: archiv01

Insertion Date: 15/07/2016

Insertion Time: 10:11

Modification Details

Modified By: umus0168

Modification Date: 20/07/2017

Modification Time: 16:23

Import Details

Import Identifier: []

System Identifier: []

GUIDs

| Prefer... | Type | GUID |
|-----------|------|-----------|
| 1 | LCCN | n90652738 |
| 2 | VIAF | 10743511 |
| * | | |

Biography Synonymy Notes Multimedia Security Audit Admin

Display Party 1 of 1 umus0117 Admin 20219



Exporting Data from EMu

- Several ways to get data out of EMu
- Copy and paste list view into MS Excel
- Nested tables and multivalued fields make it complicated
- Create reports
- Multiple CSV files
- XML

Catalogue Record

List view

| Catalogue (1) - Display | | | | | | | |
|--|-------------------------|-------------------------------------|-------------------------|-----------------------|-------------------------|----------------------------|---------------------------------|
| File Edit Select View Tools Tabs Parts Archives Multimedia Window Help | | | | | | | |
| | Object Number: (Coll... | Taxon: (Taxonomic Details) | Preservation: (Speci... | Physical Descript... | No. of Specimens: (S... | Locality: (Locality Det... | Stratigraphy: (Specimen)/Str... |
| 1 | PAL-A.00001 | Agnostus cyclopyge Tulber... | | Complete, but po... | 1 | Whiteleaved Oak, M... | Upper Lingula Flags, Merione |
| 2 | PAL-A.00002 | Microdeus punctatus Salte... | | Internal cast of c... | 1 | Dwnhyd, near Solva, ... | Menevian Group. St. David's |
| 3 | PAL-A.00004 | Sphaerophthalmus major La... | Macrofossil | On same tablet a... | | Malverns, Herefordsh... | Merioneth. Upper Lingula Fla |
| 4 | PAL-A.00005 | Sphaerophthalmus major La... | Macrofossil | On same tablet a... | | Malverns, Herefordsh... | Merioneth. Upper Lingula Fla |
| 5 | PAL-A.00006 | Olenopyge teretifrons (Angel... | | | 1 | Malvern [Hills]. Heref... | Upper Lingula Flags, Merione |
| 6 | PAL-A.00007 | | Other | Transferred to B... | 0 | | |
| 7 | PAL-A.00008 | | Other | Transferred to B... | 0 | | |
| 8 | PAL-A.00009 | Olenus pauper (Phillips, 187... | Macrofossil | | | Southern Malverns, ... | Merioneth. Upper Lingula Fla |
| 9 | PAL-A.00010 | Baliella lyelli (Hicks, 1871) : ... | Macrofossil | | | Headland near Nun's... | St David's. ? Solva Group |
| 10 | PAL-A.00011 | Paradoxodes sedgwicki (Hic... | Macrofossil | Counterpart of S... | | Headland near Nun's... | St David's. ? Solva Group |
| 11 | PAL-A.00012 | | Other | Transferred to B.6 | 0 | | |
| 12 | PAL-A.00013 | | Other | Transferred to B.7 | 0 | | |
| 13 | PAL-A.00014 | | Other | Transferred to B.9 | 0 | | |
| 14 | PAL-A.00015 | | Other | Transferred to B... | 0 | | |
| 15 | PAL-A.00016 | | Other | Transferred to B... | 0 | | |
| 16 | PAL-A.00016/p | | Other | Transferred to B... | 0 | | |
| 17 | PAL-A.00017 | | Other | Transferred to B... | 0 | | |
| 18 | PAL-A.00018 | | Other | Transferred to B.8 | 0 | | |
| 19 | PAL-A.00019 | | Other | Transferred to B.10 | 0 | | |
| 20 | PAL-A.00020 | | Other | Transferred to B.11 | 0 | | |
| 21 | PAL-A.00021 | Agnostus eskridgei Hicks, 1... | | Natural mould | 1 | [St David's, Porth-y-R... | Menevian Group. St. David's |
| 22 | PAL-A.00022 | | Other | Transferred to B... | 0 | | |
| 23 | PAL-A.00023 | | Other | Transferred to B... | 0 | | |
| 24 | PAL-A.00024/p | | Other | Transferred to B... | 0 | | |
| 25 | PAL-A.00025 | | Other | Transferred to B... | 0 | | |
| 26 | PAL-A.00026 | | Other | Transferred to B... | 0 | | |
| 27 | PAL-A.00027 | | Other | Transferred to B... | 0 | | |
| 28 | PAL-A.00028 | | Other | Transferred to B... | 0 | | |
| 29 | PAL-A.00029 | | Other | Transferred to B... | 0 | | |
| 30 | PAL-A.00030 | | Other | Transferred to B... | 0 | | |
| 31 | PAL-A.00031 | | Other | Transferred to B... | 0 | | |
| 32 | PAL-A.00032 | | Other | Transferred to B... | 0 | | |
| 33 | PAL-A.00033 | | Other | Transferred to B... | 0 | | |
| 34 | PAL-A.00034-A.0003... | | Other | Transferred to B... | 0 | | |

Display 2522 matching objects

umus0117 Admin 22219

Catalogue Record

Summary in
table linked to
another
module

Catalogue (1) - Display

File Edit Select View Tools Tabs Parts Archives Multimedia Window Help

PAL-A.00004. *Sphaerophthalmus major* Lake, 1913. Trilobita. Upper Lingula Flags Formation, Merioneth, England 787257

Identification Details

| Taxon | Preferred | Type Status | Identified By | Identification Date |
|---|-----------|-------------|---------------|---------------------|
| 1 <i>Sphaerophthalmus major</i> Lake, 1913 : <i>Sphaerophthalmus</i> : <i>Ptychoparida</i> : <i>Trilobita</i> : <i>Arthropoda</i> : <i>Animalia</i> | | | | |
| 2 <i>Sphaerophthalmus major</i> Lake, 1913 : <i>Sphaerophthalmus</i> : <i>Ptychoparida</i> : <i>Trilobita</i> : <i>Arthropoda</i> : <i>Animalia</i> | | Syntype | | |
| 3 <i>Sphaerophthalmus major</i> Lake, 1913 : <i>Sphaerophthalmus</i> : <i>Ptychoparida</i> : <i>Trilobita</i> : <i>Arthropoda</i> : <i>Animalia</i> | | Syntype | | |
| 4 <i>Sphaerophthalmus major</i> Lake, 1913 : <i>Sphaerophthalmus</i> : <i>Ptychoparida</i> : <i>Trilobita</i> : <i>Arthropoda</i> : <i>Animalia</i> | | Syntype | | |
| * | | | | |

Specimen Details

No. of Specimens:

Preservation:

Brief Description:

Components:

Object Name:

Physical Description:

Locality Details

| Locality | Precise Location | Coordinates |
|---|------------------|-------------|
| 1 Malvern, Herefordshire or Worcestershire, England | | |
| * | | |

Stratigraphic Details

Stratigraphy:

Summary Palaeontology Object History Production Associations Condition Relationships References Subjects Labels/Inscript. Inscriptions

Display Object 1 of 1 umus0117 Admin 22219

Taxonomy Record

Detailed
data about
taxon

Taxonomy (1) - Display

File Edit Select View Tools Tabs Hierarchy Multimedia Window Help

Sphaerophthalmus major Lake, 1913 : Sphaerophthalmus : Ptychopariida : Trilobita : Arthropoda : Animalia 476439

Classification

Parent: Sphaerophthalmus : Ptychopariida : Trilobita : Arthropoda : Anim

Family & No:

Genus & No: Sphaerophthalmus

Subgenus:

Species: major

Subspecies:

Other:

| Other Rank | Other Value |
|------------|-------------|
| * | |

Hybrid & Parentage

Hybrid? Rank:

Sex: Parent:

Cultivar Name

Cultivar? Name:

Controls

Applicable Code: ICZN Rank: Species

Seq. Num.:

Scientific Name

Automatic? Yes Name: Sphaerophthalmus major Lake, 1913

Currently Accepted Name

Currently Accepted? Current Name:

Classification Citations Primary Citation Authors Availability Validity Homotypics Higher Class. Hierarchy Geog. Status Common Name

Display Taxon 15 of 24 umus0117 Admin 22219



Exporting Data from EMu

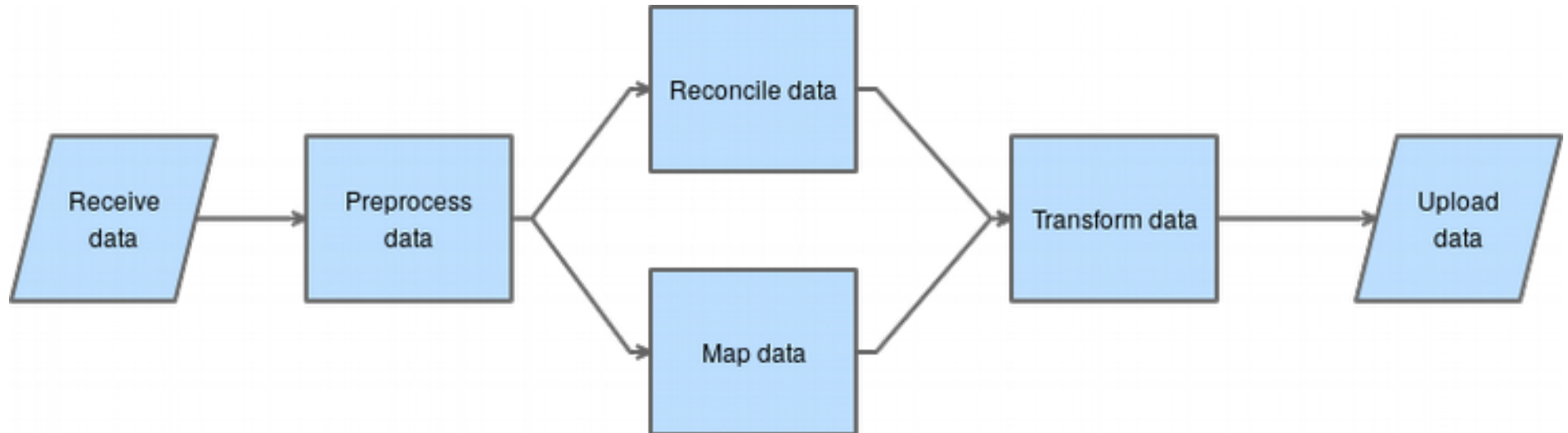
- Several ways to get data out of EMu
- Copy and paste list view into MS Excel
- Nested tables and multivalued fields make it complicated
- Create reports
- Multiple CSV files
- XML

XML Export from EMu

```
<table name="ecatalogue">
  <!-- Row 1 -->
  <tuple>
    <atom name="irn" type="text" size="short">787257</atom>
    <atom name="ColCollection" type="text" size="short">Palaeontology</atom>
    <atom name="ColObjectNumber" type="text" size="short">PAL-A.00004</atom>
    <tuple name="AccAccessionLotRef">
      <atom name="AcqAcquisitionRemarks" type="text" size="short"/>
      <atom name="AcqDateOwnership" type="text" size="short"/>
      <atom name="AcqDateOwnershipLower" type="text" size="short"/>
      <atom name="AcqDateOwnershipUpper" type="text" size="short"/>
    </tuple>
    <table name="TaxTaxonomyRef_tab">
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        <atom name="ClaSubgenus" type="text" size="short"/>
        <atom name="ClaSpecies" type="text" size="short">major</atom>
        <atom name="ClaSubspecies" type="text" size="short"/>
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        <atom name="ClaClass" type="text" size="short">Trilobita</atom>
        <atom name="ClaPhylum" type="text" size="short">Arthropoda</atom>
        <atom name="ClaKingdom" type="text" size="short">Animalia</atom>
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      </tuple>
      <table name="AutCombAuthorsRef_tab">
        <tuple>
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        </tuple>
      </table>
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      <atom name="AutBasionymYear" type="text" size="short"/>
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    <tuple>
      <atom name="ClaGenus" type="text" size="short">Sphaerophthalmus</atom>
      <atom name="ClaSubgenus" type="text" size="short"/>
```



Workflow




```

schema
table    ecatalogue
integer   irn
text short ColCollection
text short ColObjectNumber
tuple     AccAccessionLotRef
text long  AcqAcquisitionRemarks
table     AcqSourceRef_tab
text short NamLast
end
text short AcqDateOwnership
date       AcqDateOwnershipLower
date       AcqDateOwnershipUpper
end
text long  ColOtherNumbers_tab
table     TaxTaxonomyRef_tab
text short ClaGenus
text short ClaSubgenus
text short ClaSpecies
text short ClaSubspecies
text short ClaOrder
text short ClaClass
text short ClaPhylum
text short ClaKingdom
table     CitCitedInRef_tab
date       ArtPublicationDate
text long  ArtTitle
text short CitFiguresPlates
text short CitPages
table     ArtAuthorsRef_tab
text short NamLast
end
end
text short AutAuthorString

```

```

table     AutCombAuthorsRef_tab
text short NamLast
end
text short AutCombYear
table     AutBasionymAuthorsRef_tab
text short NamLast
end
text short AutBasionymYear
end
table     IdeTypeStatus_tab
text short IdeTypeStatus
end
text long  SpeNumberSpecimens
text long  ColPhysicalDescription
text long  SpePreservation
table     SitSiteRef_tab
text long  SitSiteName_tab
text long  LocCountry_tab
end
tuple     PalStratigraphyRef
text long  ChrMainChronolInterpretation
text long  BioMainBiostratInterpretation
text long  LitMainLithostratInterpretation
end
table     ColCollectorsRef_tab
text short NamLast
end
text long  ColCollectionDatesText_tab
table     BibBibliographyRef_tab
text long  ArtTitle
text short CitPages
text short CitFiguresPlates
end
text long  BibReference_tab
end

```



| Field | Description |
|---------------------------------------|---|
| Type (Other Numbers) | A description of an Other number (an alternative number for an object) assigned to an object. |
| No. of Specimens | A record of the number of objects referred to in an object record. |
| Type Status | A statement of the standing of a natural science specimen in relation to others in existence. |
| Object Number | A unique number identifying an object or specimens, including any separated parts (SPECTRUM). |
| Citation Author | Author of the citation for a taxonomic record |
| Country | Country where the object was collected in the field. |
| Date of Ownership (Accession Details) | Date on which ownership of accession lot formally transfers to the institution. |
| Earliest Date of Ownership | Earliest date in a range of circa dates. |
| Acquisition Notes | Extra text notes to accompany acquisition details. |
| Figure/Plate | Figures or plates that relate to the citation. |
| Preservation (Specimen) | Form of the specimen or the method used to mount or preserve a specimen |
| Author and Year | Full Author Citation for the taxonomic record |
| Physical Description | General description of an object. |
| Locality | Geographical location where the object was collected in the field. |
| Latest Date of Ownership | Latest date in a range of circa dates. |
| Bibliography | List of any bibliographic records associated with the collection item |
| Reference | Name as it appears in the citation text in bibliographic records associated with the collection item |
| Author (Name Authors) | Name Author citation name for the taxonomic record |
| Acquisition Source/Vendor Name | Name of the Person or Organisation from whom an object was obtained. It may be the Person or Organisation who owned an object before title was transferred to the organisation or may be an agent or other intermediary between the acquiring organisation and the owner. |
| Collected By (Field Collectors) | Name of the Person or Organisation responsible for collecting a specimen or object in the field. |
| Author (Parenthetic Authors) | Parenthetic Author citation name for the taxonomic record |
| Date Collected (Field Collectors) | The date an object is collected in the field |

Preprocessing

- Common tasks
 - Remove empty fields
 - Remove problematic characters (e.g. "?")
 - Split delimited fields (e.g. multiple people)
 - Build local authority files (+ URIs and labels)
 - Normalising naming of fields for use in 3M
 - Encode URIs (e.g. replace spaces etc.)



```

<table name="ecatalogue">
  <!-- Row 1 -->
  <tuple>
    <atom name="irn" type="text" size="short">787257</atom>
    <atom name="ColCollection" type="text" size="short">Palaeontology</atom>
    <atom name="ColObjectNumber" type="text" size="short">PAL-A.00004</atom>
  <tuple name="AccAccessionLotRef">
    <atom name="AcqAcquisitionRemarks" type="text" size="short"/>
    <atom name="AcqDateOwnership" type="text" size="short"/>
    <atom name="AcqDateOwnershipLower" type="text" size="short"/>
    <atom name="AcqDateOwnershipUpper" type="text" size="short"/>
  </tuple>
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      <atom name="ClaSpecies" type="text" size="short">major</atom>
      <atom name="ClaSubspecies" type="text" size="short"/>
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    <atom name="ClaSpecies" type="text" size="short">major</atom>
    <atom name="ClaSubspecies" type="text" size="short"/>
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        Soc. (Monogr.), 65-88, pls VII-X.</atom>
      <atom name="CitFiguresPlates" type="text" size="short"/>
      <atom name="CitPages" type="text" size="short"/>
    <table name="ArtAuthorsRef_tab">
      <tuple>
        <atom name="NamLast" type="text" size="short">Lake</atom>
      </tuple>
    </table>
  </table>
</table>

```

```

- <ecatalogue>
  - <row>
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    <ColCollection>Palaeontology</ColCollection>
    <ColObjectNumber>PAL-A.00004</ColObjectNumber>
  - <TaxTaxonomyRef_tab>
    - <row>
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        <label>Arthropoda</label>
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      - <ClaKingdom>
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        <label>Animalia</label>
      </ClaKingdom>
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          <label>Lake</label>
        </NamLast>
      </row>
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    <AutCombYear>1913</AutCombYear>
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    - <ClaClass>
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      <label>Trilobita</label>
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    - <ClaPhylum>
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      <label>Arthropoda</label>
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  </row>

```

COLLECTOR

DATETEXT

GEODATA

2002

2017



NamLast

ColCollectionDatesText_tab

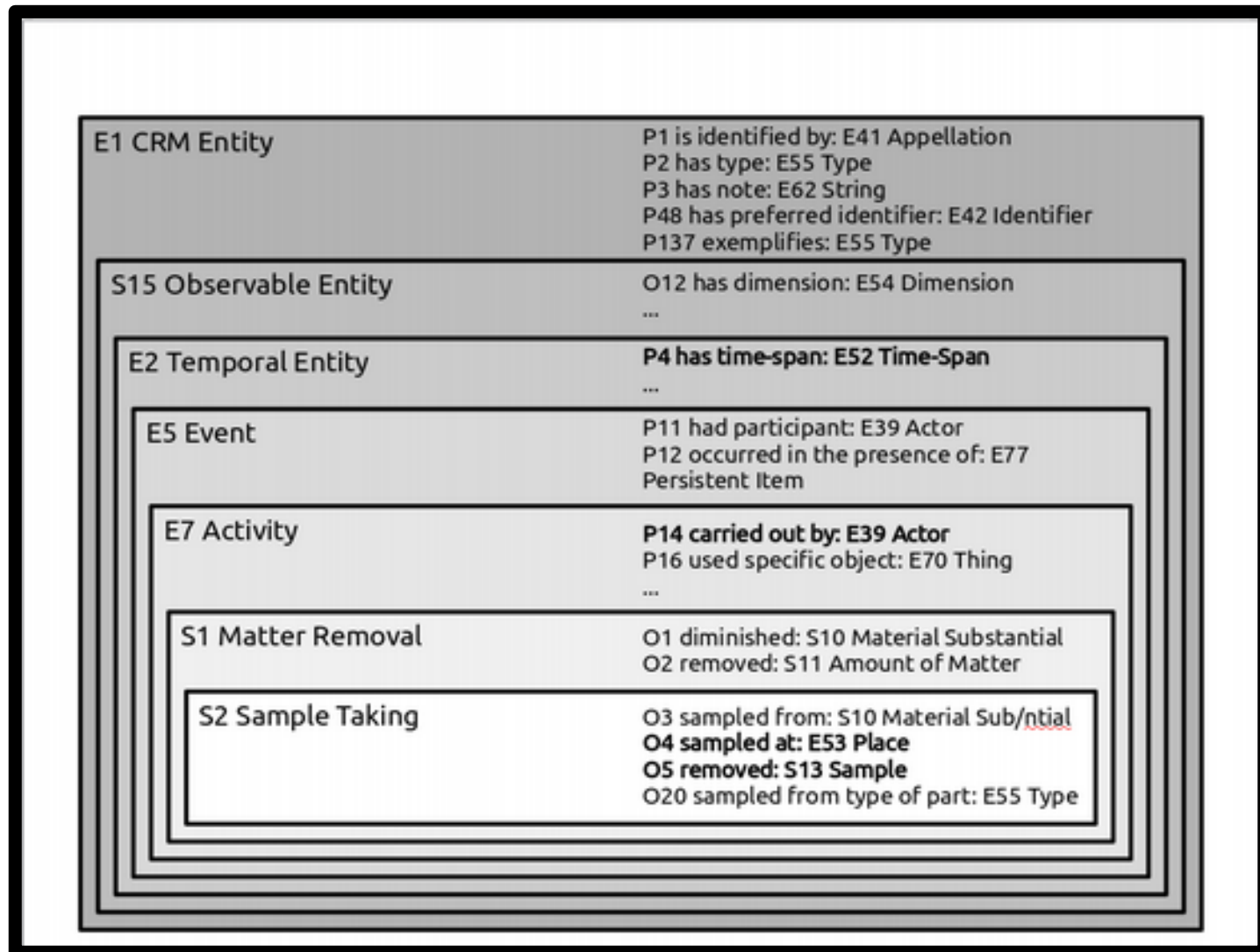
SitSiteName_tab

1830

2017



Match fields to Classes



E39 Actor

E52 Time-span

E53 Place

2002

2017



E39 Actor

E52 Time-span

E53 Place

1830

2017



COLLECTOR

E39 Actor

GEODATA

E53 Place

DATETEXT

E52 Time-span

2002



2017

NamLast

E39 Actor

ColCollectionDatesText_tab

E52 Time-span

SitSiteName_tab

E53 Place

1830



2017

COLLECTOR

E39 Actor

GEODATA

E53 Place

DATETEXT

E52 Time-span

2002



2017

NamLast

E39 Actor

ColCollectionDatesText_tab

E52 Time-span

SitSiteName_tab

E53 Place

1830



2017

COLLECTOR

E39 Actor

GEODATA

E53 Place

DATETEXT

E52 Time-span

2002



2017

NamLast

E21 Person

ColCollectionDatesText_tab

E52 Time-span

SitSiteName_tab

E53 Place

1830



2017

E21 Person

Subclass of: [E20](#) Biological Object
[E39](#) Actor

Scope note: This class comprises real persons who live or are assumed to have lived.

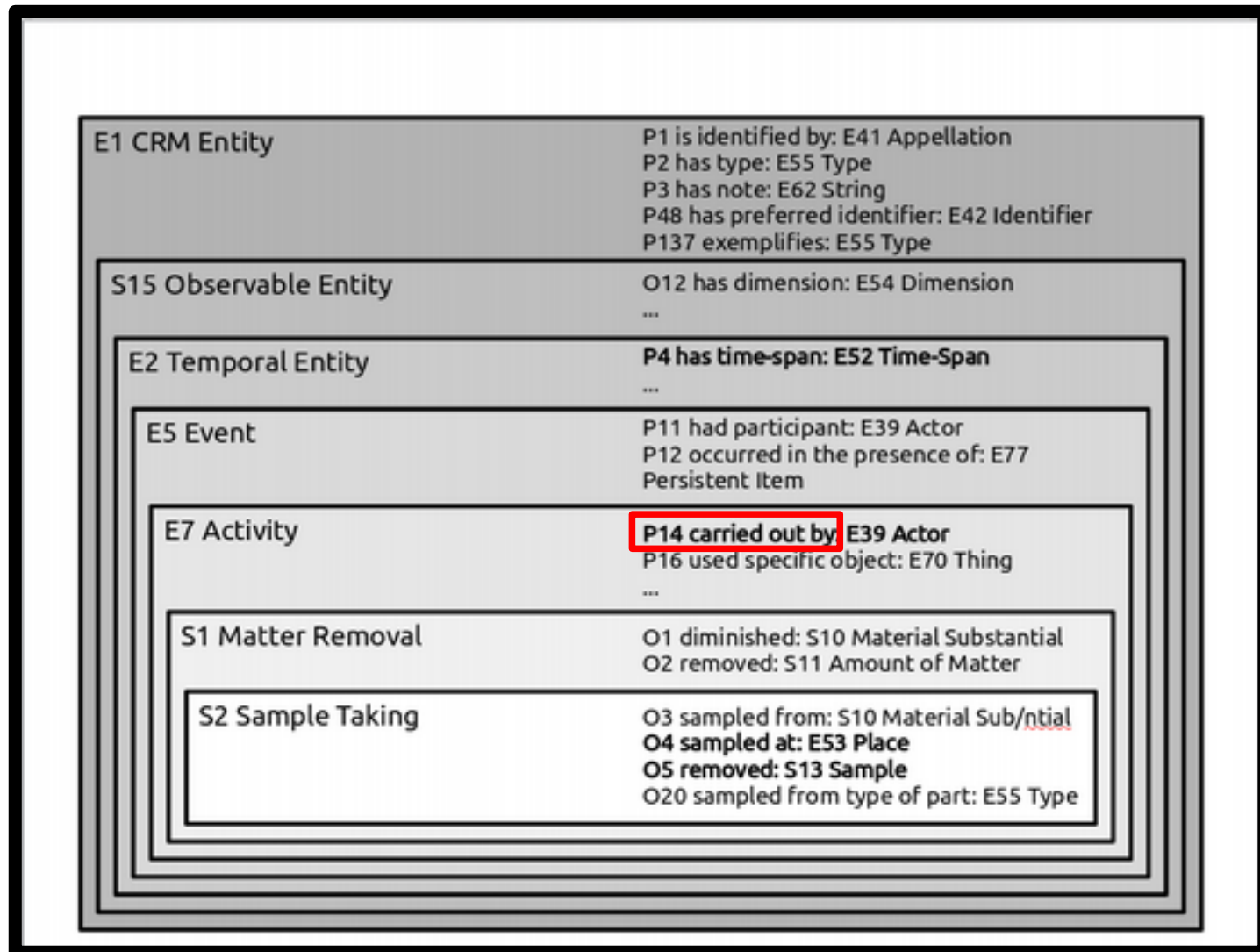
Legendary figures that may have existed, such as Ulysses and King Arthur, fall into this class if the documentation refers to them as historical figures. In cases where doubt exists as to whether several persons are in fact identical, multiple instances can be created and linked to indicate their relationship. The CRM does not propose a specific form to support reasoning about possible identity.

Examples:

- Tut-Ankh-Amun
- Nelson Mandela

- Search for all E39 Actors + any subclasses
or
- Search based on property
 - which one?

Match fields through properties



COLLECTOR

E39 Actor

P14 carried out by

GEODATA

E53 Place

DATETEXT

E52 Time-span

2002



2017

NamLast

E21 Person

P14 carried out by

SitSiteName_tab

E53 Place

ColCollectionDatesText_tab

E52 Time-span

1830



2017

COLLECTOR

E39 Actor

E39 Actor

DETBY

P14 carried out by

GEODATA

E53 Place

DATETEXT

E52 Time-span

P14 carried out by

2002

2006

2017



NamLast

E21 Person

P14 carried out by

ColCollectionDatesText_tab

E52 Time-span

SitSiteName_tab

E53 Place

1830

1850

2017



COLLECTOR

E39 Actor

E39 Actor

DETBY

P14 carried out by

GEODATA

E53 Place

DATETEXT

E52 Time-span

P14 carried out by

2002

S2 Sample taking

2006

2017



E17 Type Assignment

NamLast

E21 Person

P14 carried out by

ColCollectionDatesText_tab

E52 Time-span

SitSiteName_tab

E53 Place

S2 Sample taking

1830

1850

2017



crmsci:S2_Sample_Collection crm:P14_carried_out_by?collector

```
SELECT ?collector
```

```
WHERE {
```

```
    crmsci:S2_Sample_Collection crm:P14_carried_out_by ?collector
```

```
}
```

```
prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#>
prefix owl: <http://www.w3.org/2002/07/owl#>
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
PREFIX dbo: <http://dbpedia.org/ontology/>
PREFIX crm: <http://www.cidoc-crm.org/cidoc-crm/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX crmsci: <http://www.ics.forth.gr/isl/CRMext/CRMsci.rdfs/>
```

```
SELECT DISTINCT ?ds ?pll
{
  {
    SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/natural-history/sparql> {
      SELECT ("mnh" AS ?ds) ?pll {
        ?ee crmsci:04_sampled_at ?pl .
        ?pl owl:sameAs ?pll .
      }
    }
  } UNION {
    SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/druce-collection/sparql> {
      SELECT ("druce" AS ?ds) ?pll {
        ?sp crmsci:05i_was_removed_by ?ee .
        ?ee crmsci:04_sampled_at ?pl .
        ?pl owl:sameAs ?pll .
        ?sp crm:P48_has_preferred_identifier ?spi .
        ?spi rdfs:label ?spil

        FILTER regex(?spil, "[^Fos]")
      }
    }
  }
}
ORDER BY DESC(?ee)
```


| ds | pll |
|-----|---|
| anh | http://sws.geonames.org/11495284 |
| anh | http://sws.geonames.org/11609932 |
| anh | http://sws.geonames.org/4110001 |
| anh | http://sws.geonames.org/2175555 |
| anh | http://sws.geonames.org/11609928 |
| anh | http://sws.geonames.org/11495151 |
| anh | http://sws.geonames.org/11609929 |
| anh | http://sws.geonames.org/11495119 |
| anh | http://sws.geonames.org/2171586 |
| anh | http://sws.geonames.org/11495416 |
| anh | http://sws.geonames.org/11609938 |
| anh | http://sws.geonames.org/8598695 |
| anh | http://sws.geonames.org/3103909 |
| anh | http://sws.geonames.org/4798308 |
| anh | http://sws.geonames.org/5771735 |
| anh | http://sws.geonames.org/3209067 |
| anh | http://sws.geonames.org/5246742 |
| anh | http://sws.geonames.org/7297639 |
| anh | http://sws.geonames.org/6932823 |
| anh | http://sws.geonames.org/4613560 |
| anh | http://sws.geonames.org/2965484 |
| anh | http://sws.geonames.org/9409292 |
| anh | http://sws.geonames.org/2965534 |
| anh | http://sws.geonames.org/2965479 |
| anh | http://sws.geonames.org/7293160 |
| anh | http://sws.geonames.org/2965073 |
| anh | http://sws.geonames.org/892762 |
| anh | http://sws.geonames.org/2964574 |
| anh | http://sws.geonames.org/7291921 |
| anh | http://sws.geonames.org/11609917 |
| anh | http://sws.geonames.org/11609915 |
| anh | http://sws.geonames.org/11609947 |
| anh | http://sws.geonames.org/11609940 |
| anh | http://sws.geonames.org/11609943 |
| anh | http://sws.geonames.org/11609945 |
| anh | http://sws.geonames.org/11609935 |
| anh | http://sws.geonames.org/11609936 |
| anh | http://sws.geonames.org/2163855 |
| anh | http://sws.geonames.org/11494928 |
| anh | http://sws.geonames.org/11495083 |
| anh | http://sws.geonames.org/11609942 |
| anh | http://sws.geonames.org/2657869 |
| anh | http://sws.geonames.org/2657684 |
| anh | http://sws.geonames.org/2657166 |
| anh | http://sws.geonames.org/2656985 |
| anh | http://sws.geonames.org/2656662 |
| anh | http://sws.geonames.org/2656406 |
| anh | http://sws.geonames.org/2656044 |
| anh | http://sws.geonames.org/2655856 |
| anh | http://sws.geonames.org/2655415 |

| ds | pll |
|-----|---|
| anh | http://sws.geonames.org/2655378 |
| anh | http://sws.geonames.org/2655398 |
| anh | http://sws.geonames.org/2654726 |
| anh | http://sws.geonames.org/2654213 |
| anh | http://sws.geonames.org/2654008 |
| anh | http://sws.geonames.org/2653753 |
| anh | http://sws.geonames.org/2653346 |
| anh | http://sws.geonames.org/2653344 |
| anh | http://sws.geonames.org/2653343 |
| anh | http://sws.geonames.org/2653172 |
| anh | http://sws.geonames.org/2653133 |
| anh | http://sws.geonames.org/2653073 |
| anh | http://sws.geonames.org/2652411 |
| anh | http://sws.geonames.org/2652324 |
| anh | http://sws.geonames.org/2650629 |
| anh | http://sws.geonames.org/2649532 |
| anh | http://sws.geonames.org/2649435 |
| anh | http://sws.geonames.org/2649035 |
| anh | http://sws.geonames.org/2652191 |
| anh | http://sws.geonames.org/2651705 |
| anh | http://sws.geonames.org/2160182 |
| anh | http://sws.geonames.org/2161511 |
| anh | http://sws.geonames.org/2165489 |
| anh | http://sws.geonames.org/2636805 |
| anh | http://sws.geonames.org/2636766 |
| anh | http://sws.geonames.org/2636671 |
| anh | http://sws.geonames.org/2148852 |
| anh | http://sws.geonames.org/2636389 |
| anh | http://sws.geonames.org/2636066 |
| anh | http://sws.geonames.org/2636050 |
| anh | http://sws.geonames.org/2506999 |
| anh | http://sws.geonames.org/2634095 |
| anh | http://sws.geonames.org/11609021 |
| anh | http://sws.geonames.org/2634534 |
| anh | http://sws.geonames.org/11591953 |
| anh | http://sws.geonames.org/2634219 |
| anh | http://sws.geonames.org/2143922 |
| anh | http://sws.geonames.org/11609014 |
| anh | http://sws.geonames.org/2651514 |
| anh | http://sws.geonames.org/2651385 |
| anh | http://sws.geonames.org/2650839 |
| anh | http://sws.geonames.org/2650613 |
| anh | http://sws.geonames.org/2650225 |
| anh | http://sws.geonames.org/2649791 |
| anh | http://sws.geonames.org/2649788 |
| anh | http://sws.geonames.org/2649553 |
| anh | http://sws.geonames.org/2649277 |
| anh | http://sws.geonames.org/2648831 |
| anh | http://sws.geonames.org/2647958 |
| anh | http://sws.geonames.org/2647855 |

| ds | pll |
|-----|---|
| anh | http://sws.geonames.org/2647696 |
| anh | http://sws.geonames.org/2647428 |
| anh | http://sws.geonames.org/2647239 |
| anh | http://sws.geonames.org/2646916 |
| anh | http://sws.geonames.org/2646648 |
| anh | http://sws.geonames.org/2646211 |
| anh | http://sws.geonames.org/2640832 |
| anh | http://sws.geonames.org/2646809 |
| anh | http://sws.geonames.org/2639814 |
| anh | http://sws.geonames.org/2639715 |
| anh | http://sws.geonames.org/2639663 |
| anh | http://sws.geonames.org/2639598 |
| anh | http://sws.geonames.org/2639337 |
| anh | http://sws.geonames.org/2681389 |
| anh | http://sws.geonames.org/2638368 |
| anh | http://sws.geonames.org/2638252 |
| anh | http://sws.geonames.org/2638854 |
| anh | http://sws.geonames.org/2637829 |
| anh | http://sws.geonames.org/2637478 |
| anh | http://sws.geonames.org/2637277 |
| anh | http://sws.geonames.org/2637244 |
| anh | http://sws.geonames.org/2961344 |
| anh | http://sws.geonames.org/2655818 |
| anh | http://sws.geonames.org/2654675 |
| anh | http://sws.geonames.org/2963031 |
| anh | http://sws.geonames.org/2650345 |
| anh | http://sws.geonames.org/2645108 |
| anh | http://sws.geonames.org/2644216 |
| anh | http://sws.geonames.org/2640354 |
| anh | http://sws.geonames.org/2640045 |
| anh | http://sws.geonames.org/2639804 |
| anh | http://sws.geonames.org/2655192 |
| anh | http://sws.geonames.org/2637379 |
| anh | http://sws.geonames.org/2645804 |
| anh | http://sws.geonames.org/2645745 |
| anh | http://sws.geonames.org/2645722 |
| anh | http://sws.geonames.org/2645510 |
| anh | http://sws.geonames.org/2645470 |
| anh | http://sws.geonames.org/2645431 |
| anh | http://sws.geonames.org/11609023 |
| anh | http://sws.geonames.org/2633454 |
| anh | http://sws.geonames.org/2633373 |
| anh | http://sws.geonames.org/2633366 |
| anh | http://sws.geonames.org/11612613 |
| anh | http://sws.geonames.org/2637144 |
| anh | http://sws.geonames.org/2635937 |
| anh | http://sws.geonames.org/2635858 |
| anh | http://sws.geonames.org/2635623 |
| anh | http://sws.geonames.org/2645106 |
| anh | http://sws.geonames.org/2962979 |



```
prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#>
prefix owl: <http://www.w3.org/2002/07/owl#>
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
PREFIX dbo: <http://dbpedia.org/ontology/>
PREFIX crm: <http://www.cidoc-crm.org/cidoc-crm/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX crmsci: <http://www.ics.forth.gr/isl/CRMext/CRMsci.rdfs/>
```

```
SELECT DISTINCT ?pll
{
  SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/natural-history/sparql> {
    ?pll owl:sameAs ?pll .
  }

  SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/druce-collection/sparql> {
    ?pll2 owl:sameAs ?pll .
  }
}
ORDER BY ASC(?pll)

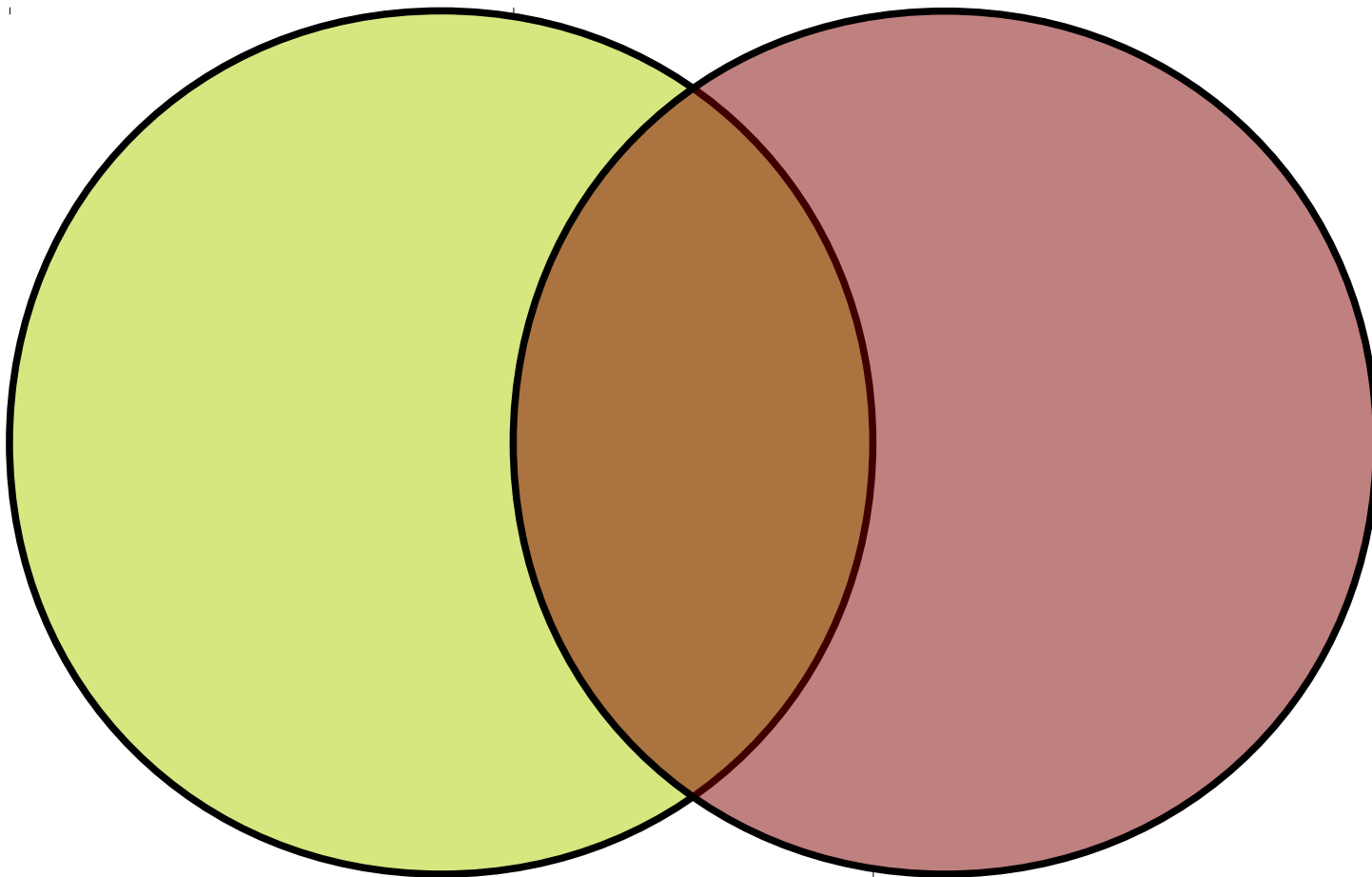
LIMIT 1000
```



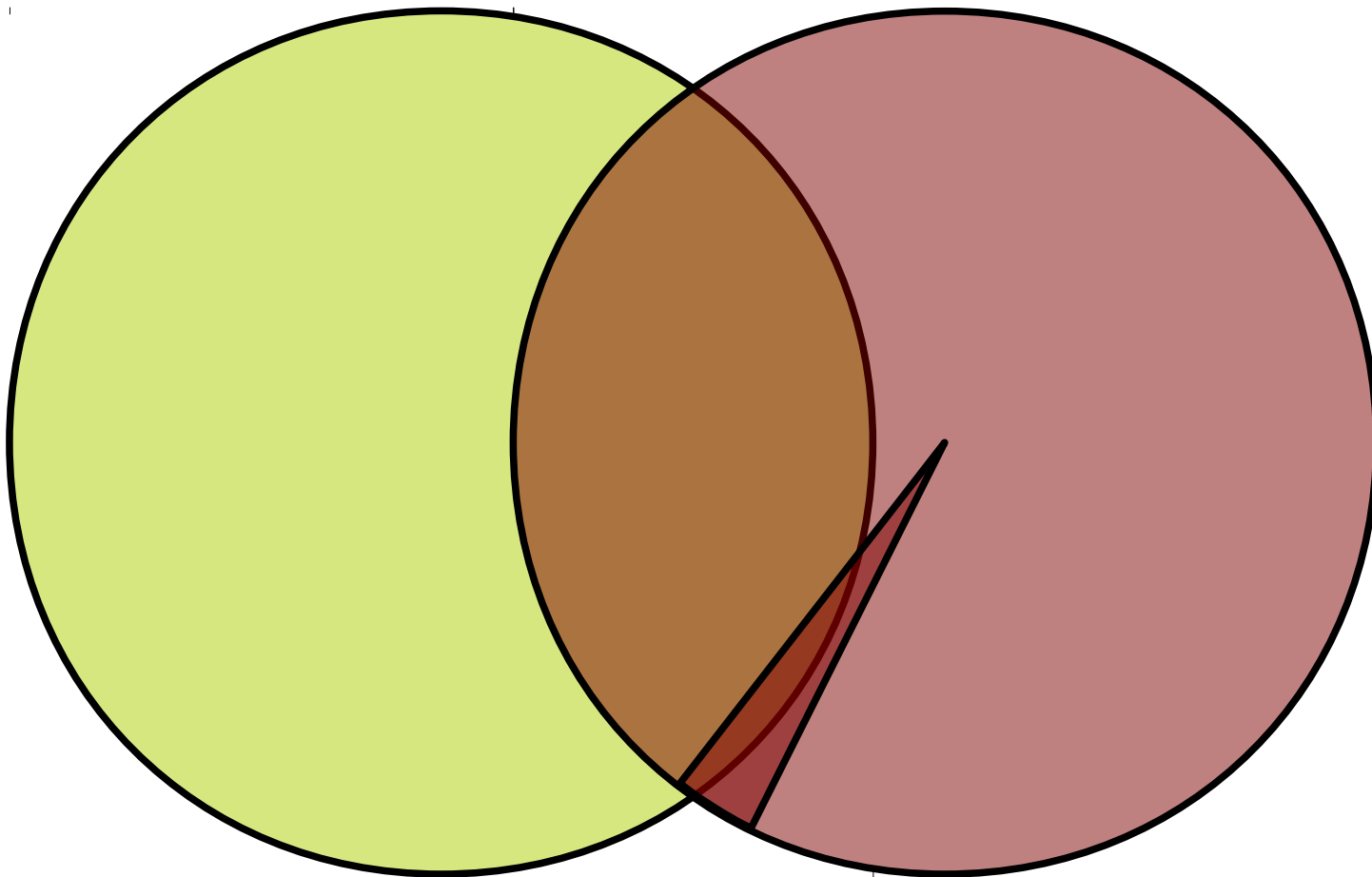

About 40 common places out of 1312



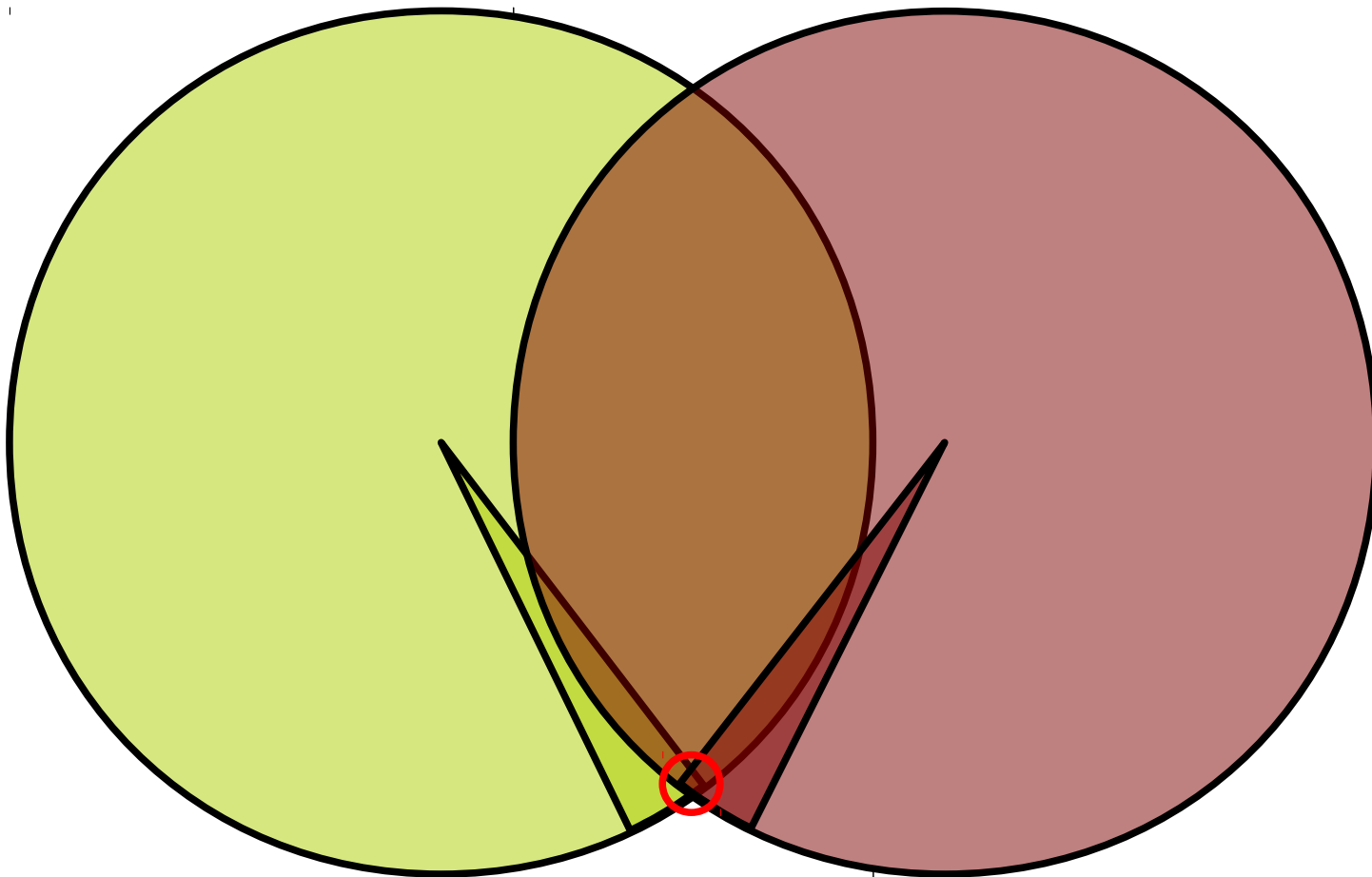
Poor overlap - reconciliation



Poor overlap - reconciliation



Poor overlap - reconciliation



Classification (type of type)

- MNH

- KINGDOM
- PHYLUM
- CLASS
- ORDER
- FAMILY
- GENUS
- SPECIES

- Druce

- KINGDOM
- DIVISION
- CLASS
- ORDER
- FAMILY
- GENUS
- SUBGENUS
- SP1
- SP2
- SP3

new statements needed for matching

Consistent mappings

```
prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#>
prefix owl: <http://www.w3.org/2002/07/owl#>
PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
PREFIX dbo: <http://dbpedia.org/ontology/>
PREFIX crm: <http://www.cidoc-crm.org/cidoc-crm/>
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX crmsci: <http://www.ics.forth.gr/isl/CRMext/CRMsci.rdfs/>

SELECT DISTINCT ?ds ?pll
{
  {
    SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/natural-history/sparql> {
      SELECT ("mnh" AS ?ds) ?pll {
        ?ee crmsci:04_sampled_at ?pl .
        ?pl owl:sameAs ?pll .
      }
    }
  } UNION {
    SERVICE <https://antheia-blazegraph.oerc.ox.ac.uk/blazegraph/namespace/druce-collection/sparql> {
      SELECT ("druce" AS ?ds) ?pll {
        ?sp crmsci:05i_was_removed_by ?ee .
        ?ee crmsci:04_sampled_at ?pl .
        ?pl owl:sameAs ?pll .
        ?sp crm:P48_has_preferred_identifier ?spi .
        ?spi rdfs:label ?spil

        FILTER regex(?spil, "[^Fos]")
      }
    }
  }
}
ORDER BY DESC(?ee)
```

Next steps

- OXLOD modelling principles
- Insert external statements
- Discuss URIs and reconciliation
- Start with Ashmolean data



Next Open Workshop

13 February 2018 - OeRC

