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CLAWbarium

Islandora Camp HRM - July 20, 2018
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What We'll Cover

1. Migration - Data Modelling
2. Migration - Data Extract/Enrich
3. Migration - Node creation
4. Search Configuration
5. Enhancements
6. Data Visualization
7. Challenges
8. Next Steps



Migration - Data Modelling

- Drupal 6/F3 > Drupal 8/F4
- Reviewed existing content model and map that to a new D8 content type
- Islandora Herbarium Object
 - Fields
 - Text fields map to DarwinCore or DC
 - Geo field
 - Tags (not required)
 - Media
 - Preservation Master
 - and derivatives



Migration - Content Type

Member of	field_member_of	Entity reference
Municipality	field_dwc_municipality	Text (plain)
Municipality URI	field_dwciri_municipality	Text (plain, long)
Order	field_dwc_order	Text (plain, long)
Phylum	field_dwc_phylum	Text (plain, long)
Recorded By	field_dwc_recordedby	Text (plain, long)
Rights	field_dc_rights	Text (plain, long)
Scientific Name	field_dwc_scientificname	Text (plain)
Scientific Name URI	field_dwciri_scientificname	Text (plain, long)



Migration - RDF Mapping

```
fieldMappings:  
  field_dc_accessrights:  
    properties:  
      - 'dc:accessRights'  
  field_dc_rights:  
    properties:  
      - 'dc:rights'  
  field_dc_language:  
    properties:  
      - 'dc:language'  
  field_dc_type:  
    properties:  
      - 'dc:type'  
  field_dwciri_municipality:  
    properties:  
      - 'dwciri:municipality'  
  field_dwc_municipality:  
    properties:  
      - 'dwc:municipality'  
  field_dwc_recordedby:  
    properties:  
      - 'dwc:recordedBy'  
  field_herb_geo_field:  
    properties:  
      - 'dwc:verbatimCoordinates'  
  field_dwciri_scientificname:
```

Snippet from: [rdf.mapping.node.islandora_herbarium_object.yml](#)



Migration - Data Extract/Enrich

- Drush script to facilitate migration
 - Give script list of PIDs
 - Script extracts data from Original objects DarwinCore XML Datastream
 - Utilizes scientificName and municipality fields to perform external lookups
 - Used lookup results to enrich and correct ‘tree of life’ data and geographic data (eg. longitude and latitude)



Migration - New Nodes

- Drush script populates key node fields with extracted/enriched data
- Script imports archival image and populates the “Preservation Master” Media
- CLAW processes Preservation Master and generates a Service File and a Thumbnail



Data Entry Form

EVENT DATE

Rights

This material is provided for research, education, and private use only.

Dublin Core Rights

Municipality URI

You must provide a URL to NRCAN datasource (formatted similar to <http://geogratis.gc.ca/services/geoname/en/geonames/BACME>) in the field below. If this field is populated we will use data retrieved for it's endpoint to populate the Municipality field.

Municipality

Municipality text field (formatted similar to Mount Steward). If you provide a Municipality here and not a URI use the name here to create the URL and look up the Municipality/Location data.

Title *

Scientific Name URI



OpenSeaDragon Viewer



Fields with Field Formatters




Geofield - Geomap Field Formatter




View Edit Members Media Delete Devel

Zizania palustris - Pisquid River



Type: occurrence
Kingdom: [Plantae](#)
Phylum: [Tracheophyta](#)
Class: [Liliopsida](#)
Order: [Poales](#)
Family: [Poaceae](#)
Genus: [Zizania](#)
Specific Epithet: [palustris](#)
Scientific Name: [Zizania palustris](#)

Location (Point)
Map Satellite



Continent: North America
Country: Canada
Country Code: CA
State Province: Prince Edward Island
Municipality: [Pisquid River](#)
Latitude: 46.351417
Longitude: -62.869808
Recorded By: [A. Cairns](#)

CLAW Media Tab

<input type="checkbox"/>	NAME	MEDIA TYPE	MIME TYPE	TAGS
<input type="checkbox"/>	Symphytum asperum-tn.jpg	Image	image/jpeg	Image, Thumbnail
<input type="checkbox"/>	Symphytum_asperum	File	image/jp2	Image
<input type="checkbox"/>	Symphytum asperum-web.jpg	Image	image/jpeg	Image, Service File
<input type="checkbox"/>	Symphytum_asperum-preservation-master	File	image/tiff	Preservation Master



Configuring Search - Solr

- Utilize existing Drupal 8 Solr Module
 - Admin > Config > Search and metadata > Search API
 - Added fields to index
 - > Default Solr content index
- Configure Displays
 - Admin > Structure > Content types > Islandora Herbarium Object > Manage display
 - Configure Facet blocks



Solr Fields

Event Date	field_dwc_eventdate	field_dwc_eventdate	Date
Family	field_dwc_family	field_dwc_family	String
Genus	field_dwc_genus	field_dwc_genus	String
Kingdom	field_dwc_kingdom	field_dwc_kingdom	String
Latitude	field_dwc_decimallatitude	field_dwc_decimallatitude	String
Longitude	field_dwc_decimallongitude	field_dwc_decimallongitude	String



Solr Search Display Admin

EVA provided by Islandora CLAW

FIELD	LABEL	FORMAT
✚ EVA: Media EVAs - Thumbnail		
✚ Type	Inline	Plain text
✚ Scientific Name	Inline	Solr Facet Field Formatter
✚ Vernacular Name	Above	Plain text
✚ State Province	Inline	Plain text
✚ Municipality	Inline	Solr Facet Field Formatter
✚ Recorded By	Inline	Solr Facet Field Formatter



Solr Search Display

Sambucus canadensis - Farmington



Type: occurrence

Scientific Name: [Sambucus canadensis](#)

State Province: Prince Edward Island

Municipality: [Farmington](#)

Recorded By: [Daryl Guignon](#)

Event Date: 1968-07-29

Recorded By

Choose

Scientific Name

Choose

Specific Epithet

Choose

Genus

Choose

Family

Choose

Order



Enhancements

Modules

- Solr Facet Field Formatter
 - create links to solr facets
- Herbarium Object Module
 - Field formatters
 - Scientific name and municipality in graph view
 - Data lookup and enhancement
 - Data Visualization

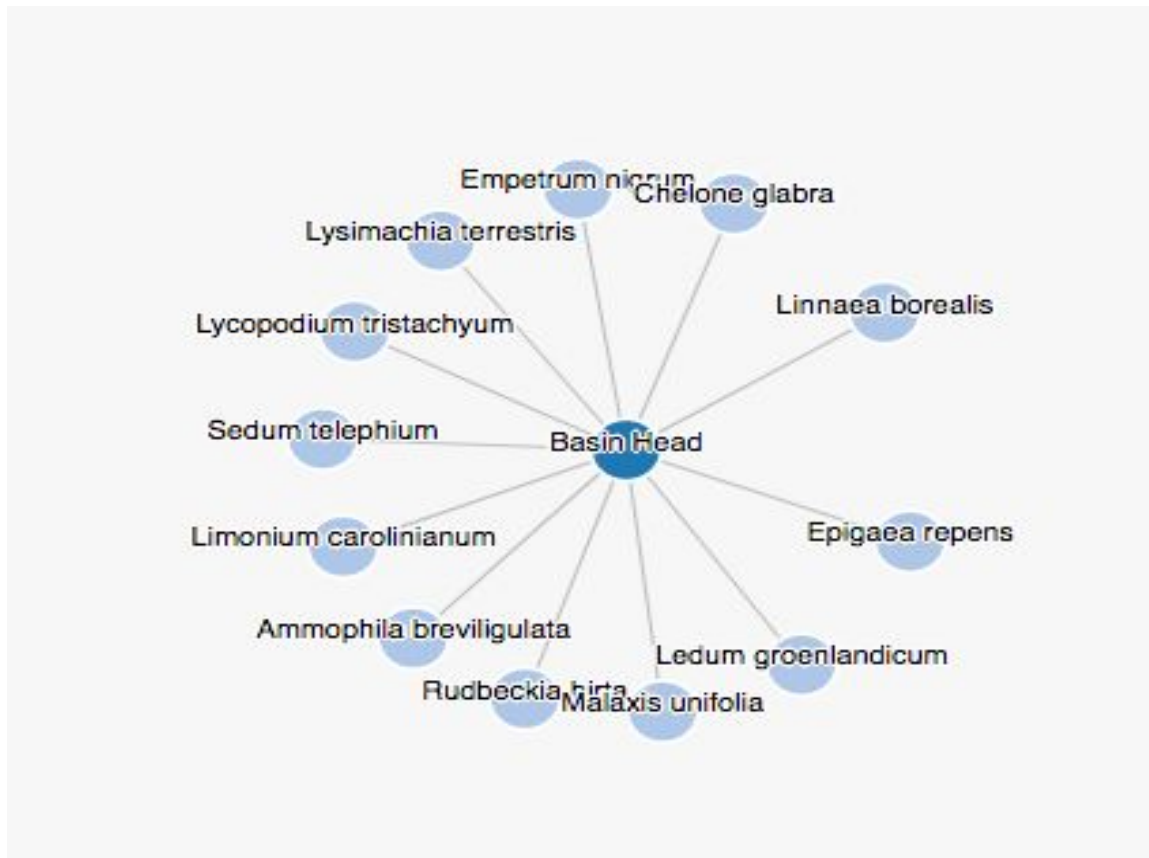


Data Enhancements - lookups

- Populate Geo data using a [NRCAN API](#)
 - [Sample dataset](#)
- Populate Tree of Life data from [GBIF](#)
 - [Sample dataset](#)

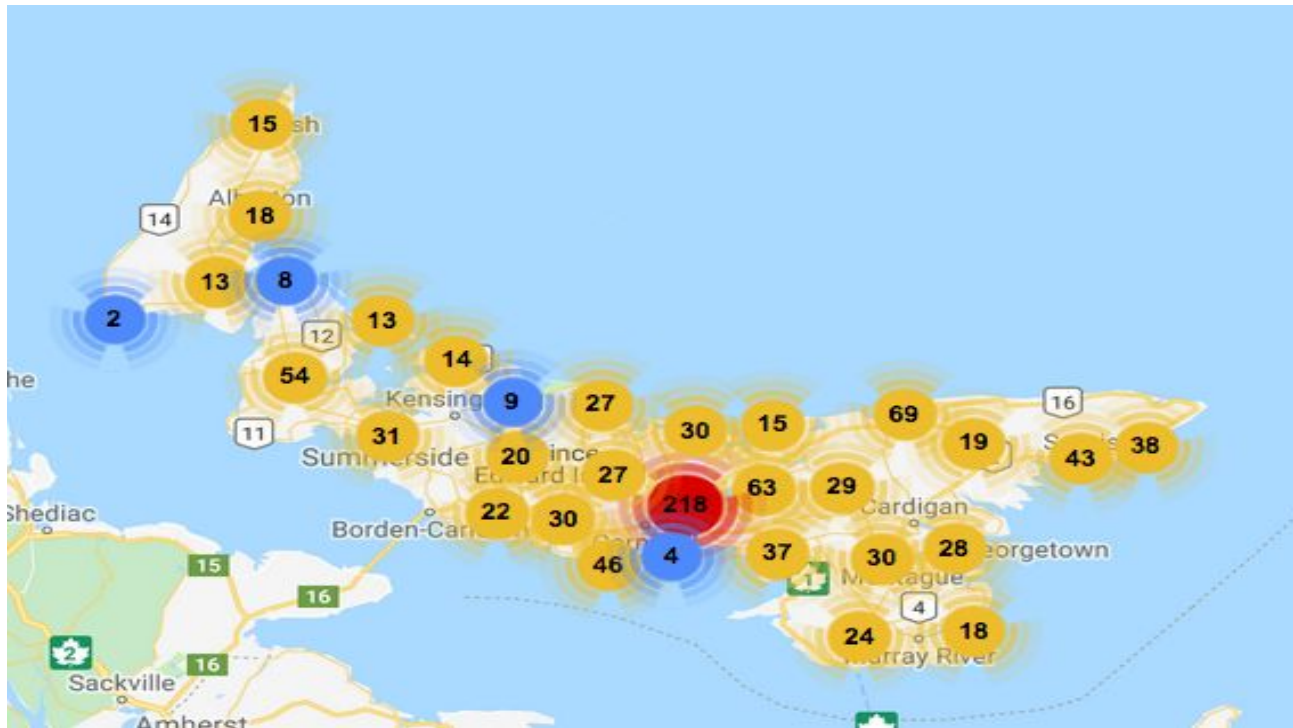


Data Visualization - D3



Data Visualization - Geo

Geofield Google Map View



Challenges Encountered

- CLAW still changing
 - Content Modelling pull request while developing
- Some bugs
 - For example placing blocks didn't work so had to use context for Solr facets block
- Learning curve
 - Drupal 8, Fedora 4, LDP etc.



Next Steps

- Theming
- Move beyond proof of concept
 - Decisions on domain name
 - Code cleanup (some assumptions should be moved to config)
 - Finalize content type
 - Final data ingest
- Interesting local developments [UNB Herbarium Drupal 8 profile](#)





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Thank you

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