



**NATURAL
HISTORY
MUSEUM**

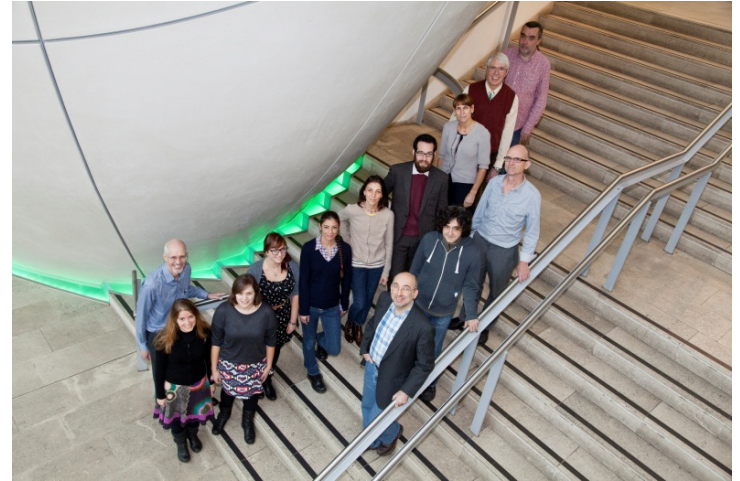


*i*Collections : Digitising the past for the future

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Introduction

- iCollections team at NHM
- Trialling mass digitisation pipelines
- 170,000 British and Irish butterflies imaged so far
- Working on small collections including British orchids



Musk Orchis. (wonder what state it
will reach you in?)
Herminium monorchis,
(for Nef.)
Walked down to Victoria - met my friend,
got out at Leatherhead & walked to Box
Hill & thereabouts. Found this Musk
Orchis to my great joy. (It smells of honey)

Why digitise?



- Making collections relevant to modern science
- Increasing the accessibility of the data held in the collections
- Creating an international resource
- Assessing size and identifying any gaps in the collections

Choosing coherent collections

How we chose the collection to digitise:

- Entire collection
- Collection with high research potential –
 - Phenology
 - Morphometrics
 - Wing pattern recognition
 - Migration changes over time
- Recognised value of collection
- Collection with no existing pipeline

Preparation of collections

- Preparation done by curators before digitisation
- Estimation of collection size
- This optimises workflow and consistency
- A small amount of re-curation is done by the digitising team

Digitisation of collections

- Advantages for the management:

Efficiency

Preservation

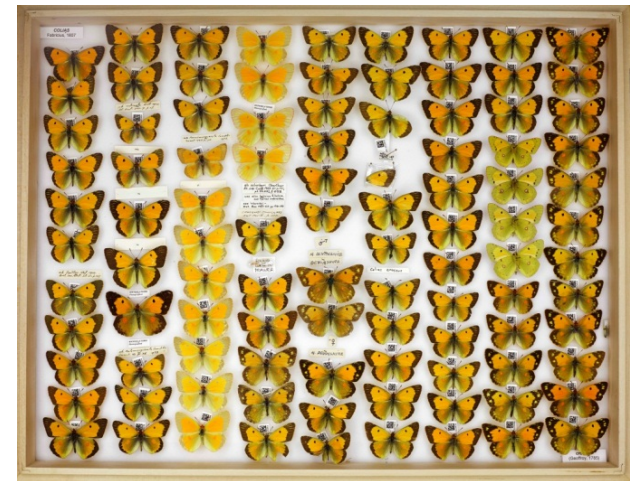
External requests

Unique barcodes

Updated taxonomy

Re-curation

Re-housing



Workflows


- Team works in pairs to maximise efficiency
- Preparation – imaging – re-housing – transcription



Resources

- I.T. is a finite resource!
- Technology choice: Bespoke MS Access 2010
 - Flexible and standard technology
 - Simple and flat interfaces - high input
 - Intergrate web tools
 - Effective and consistent
- Enable transfer of images and metadata to the CMS KeEmu data repository

Minimise the impact on the digitising team and reduce potential errors

N NATURAL HISTORY MUSEUM  **iCollections: Label data transcription** Find specimen number: Find record ID:

Taxon:

Specimen number: Drawer number:

Type status: Sex:

Preparation details:

Locality:

Collection date from: Century assumed

To:

Emergence Date: Bred

To:

Collector:

Registration detail:

Registration no.:


Label comments:

More info on label:

Status:

Admin comments:

Last updated by: on: Assigned to:



Princes Risboro.
Bucks. 1.VII.1950
Goodson.

Cockayne-Kettlewell
Coll. B.M. 1947-114.

BMNH(E) # 501973
Photographed

1 1 2 2 4 - 6 7 8 0 1 2 2 4 - 6 7 8 0 1 2 2 4 - 6

Drawer 1\Aphantopus hyperantus
BMNHE_501973.JPG

Record:

Maximise efficiency and quality of data capture workflow

NATURAL HISTORY MUSEUM iCollections: Label data transcription Show incomplete Find specimen number: Find record ID:

Taxon: **Diaphorina amoena Capener 1970**

Host: !
C. name:
Comment:

Locality: + !

Collector(s): + !

Collection date(s):
From: Century assumed !
To:

Registration detail: + !
Registration no.:

Additional numbers:

Label comments: More info on label:

Admin comments:

Status: none

Type status: Specimen number: 1251536 e
Sex: Number of individuals: 1

Drawer number: 29 Specimen ID: 563 Last updated by: system on: 03/12/2013
Assigned to: elisc2



Drawer29\Diaphorina amoena Capener 1970
BMNH_E_1251536.jpg Image ID: 22
Zoom: 25% 50% 75% 100%

Record: 1 of 1 No Filter Search

Transcription

N NATURAL HISTORY MUSEUM iCollections: Label data transcription Show incomplete Find specimen number: Find record ID:

Taxon: *Cephalanthera cephalanthera damasonium* x *longifolia* - c. x *schulzei* E.G.Camus, Bergon & A.Camus Specimen number: BM000955092 ID: 4992

Locality: W. Meon [VC 11] Zoom: 50% 75% 100%

Collector(s):
Bennett, A. 1
Cribbe, J.A. 2

Collection date(s):
From: 3 3 1949 Century assumed
To:

Registration detail:
Ex Herb. G.S. Gibson (1818-1883)
Registration no.:


Label comments:

[More info on label](#)

Admin comments:

Status: none

Last updated by: miks on: 24/02/2014
Assigned to: miks



Normalisation

- Conforming data to a “normal” structure
- Interfaces for taxonomic names and localities

NATURAL HISTORY MUSEUM **iCollections: Master site assignment**

Site variants:

Filter: Un-mapped variants only

LOCALITY	COUNTY	OTHER	MAPPE
Abbots W.			yes
Abbots Wd			yes
Abbots Wood			yes
Abbot's Wood			yes
Abbot's Wood	Sussex		yes
Abbots Wood Enclosure			
Abbots Wood; Hailsham			
Abbots Wood; on the Hyde			
Abbots Wood; Polegate			yes
Abbot's Wood; Polgate	Sussex		yes
Abbot's Ripton			
Abbot's Ripton	Huntingdonshire		
Abbot's Wood			
Abbot's Wood	East Sussex		
Abbot's Wood	Sussex		
Abbot's Wood; Eastbourne Dist.			
Abbot's Wood; Hailsham			

Site masters:

Settlement: County:

PRECISE	FEATURE	SETTLEMENT	VICECOUNTY	COUNTY
		Abbots Langley		Anglesey
		Abbots Ripton		Huntingdo
		Abbots Wood		Sussex
2 miles South	frogpond1	Abbots Wood		Sussex
	frogpond1	Abbots Wood		Sussex
	test1	Abbots Wood		Sussex
		Abbots Wood		Sussex
		Abinger		Surrey
		Addington		Bedfordsh
		Aftadrawan		Antrim
		Aldeburgh		Suffolk
		alperton		Sussex
		Ashford		Kent
		Bude		Cornwall
		Carbis Bay		Cornwall
		Cardiff		

Master site details | Mapped variants | Georeference

LOCALITY	COUNTY	OTHER
Abbots W.		
Abbots Wd		
Abbots Wood		
Abbot's Wood		
Abbot's Wood	Sussex	
Abbots Wood; Polegate		
Abbot's Wood; Polgate	Sussex	

Variant site details | Variant comments | Mapped master

Locality:

County:

Other:

Comments:

Record status:

Geo-referencing

- Providing latitude and longitude co-ordinates
- Aims to rationalise locality information
- Currently 7,500 site localities
- Enables GIS software to map species distribution over time
- Facilitates study of relationships between species distribution and changing environmental conditions

Geo-referencing

iCollections: Master site

Abbots Ripton - settlement in Huntingdonshire (county)

Master site ID: EMu IRN:

Continent:

Country:

Province:

County:

Settlement:

Physical:

Precise locality:

Georeference

Latitude:

Longitude:

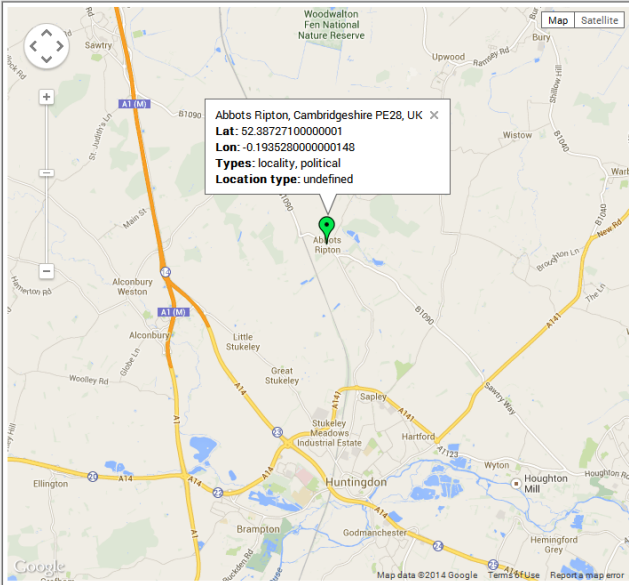
Extent: km

Methodology:

Source:

By: On:

Input data



Abbots Ripton, Cambridgeshire PE28, UK

Latitude: Longitude:

Abbots Ripton, uk

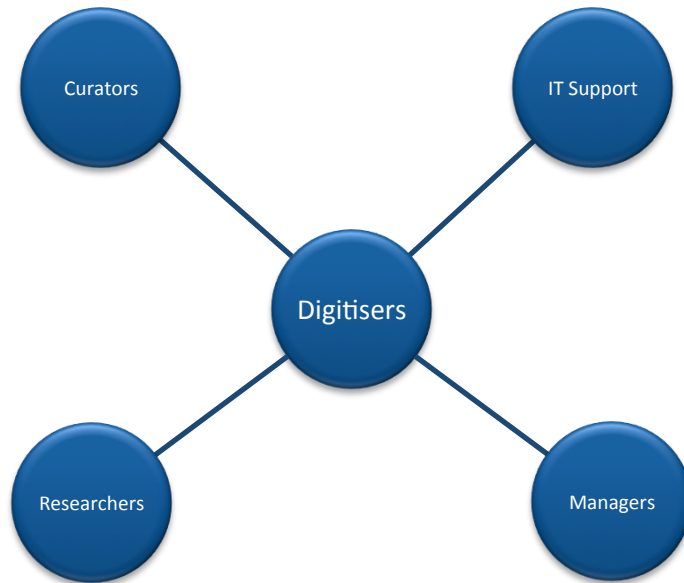
Clear previous

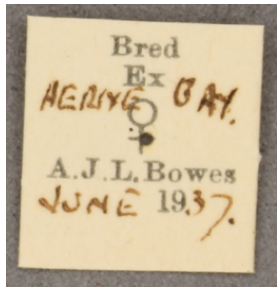
1 result for "Abbots Ripton, uk"

- [Abbots Ripton, Cambridgeshire PE28, UK](#)

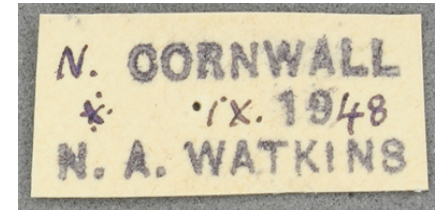
Communication

- Digitisation is a team effort
- Weekly project meetings
- Digitisers are central!





Communication



- Bred specimens flagged during transcription
- Appropriate field to record this information
- Can be removed from final dataset (phenology)
- Label interpretation lies with curators

Collection date from: Century assumed !

To:

Emergence Date: Bred

To:

Quality control

- QA processes for taxonomy and localities
- The project aims to set up a minimum standard for transcription and imaging
- What rate of error do we consider acceptable?
- Some confusions are in the data themselves!



Lessons learned

- Digitisation process should be documented with written protocols for each stage
- A unique back-end database and transcription interface is vital
- Identifying and solving problems
- Space for the digitisers to work!

Going forward

- Time management and communication are the biggest considerations for this type of project
- One digitisation team responsible for carrying out several projects across the NHM
- How to carry out more than one project at a time... redistributing the work force?

Conclusions

- Prioritise coherent, scientifically valuable collections
- Don't underestimate the importance of:
 - Geo-referencing
 - Curatorial support
 - QA for locality and taxonomy
 - Communication
 - Time management

Any Questions?

