



Inselect

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NATIONAL
HISTORY
MUSEUM

SYNTHESYS 
Synthesis of systematic resources

NERC

SCIENCE OF THE
ENVIRONMENT

 **iDigBio**
Integrated Digitized Biocollections

Acknowledgements

- Prototype and segmentation: Pieter Holtzhausen, Stéfan van der Walt
- Direction: Laurence Livermore, Vladimir Blagoderov, Vincent Smith
- Initial app development: Alice Heaton
- Testing: Louise Allan, Natalie Dale-Skey, Slide Project volunteers

Support from:

- SYNTHESYS European Community Research Infrastructure Action under the FP7 Integrating Activities Programme (Grant agreement number 312253)
- The U.K. Natural Environment Research Council





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NHM collection:

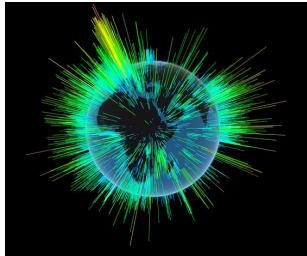
- 80 million objects
- 1.2 million types
- 4% online





Levels of digitisation

Diagnostic
Images



Georeferencing

Transcription

Label Images

Basic Image

Stub



What
Where
UID

Specimens per unit effort

iCollections



Specimens per unit effort



Whole Drawer Imaging

Diagnostic
Images

Georeferencing

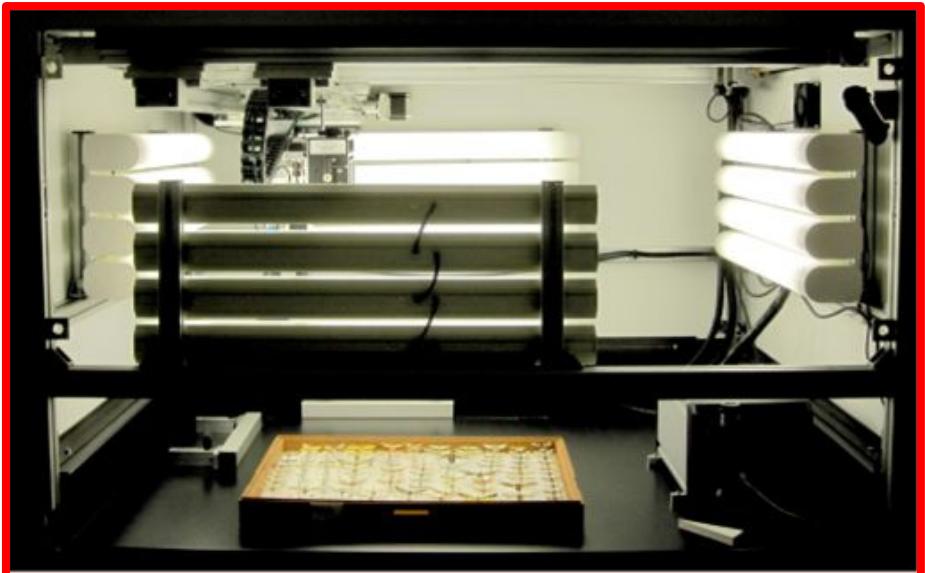
Transcription

Label Images

Basic Image

Stub

Specimens per unit effort



Pinned Insect Drawers

File Edit View Help

Open Save Segment image Subsegment box Read barcodes Zoom In Zoom Out Choose ... 84 boxes 1 selected Select by size

Boxes Objects

Odonata v1

Catalog number: 010213339
Location: Drawer 36
Taxonomy: Enallagma cyathigerum

Information

Pinned Insect Drawers

The image shows a screenshot of the Pinned Insect Drawers software. The main window displays a grid of pinned insects, each with a unique identifier (e.g., 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84) printed above it. The insects are segmented into various parts, indicated by purple boxes. A red box highlights the top-left corner of the interface, which includes the menu bar (File, Edit, View, Help), tool buttons (Open, Save, Segment image, Subsegment box, Read Circles, Choose ...), and status information (84 boxes, 1 selected). Below the menu is a toolbar with 'Boxes' and 'Objects' buttons. The main workspace is framed by a red border. To the right, a detailed view of a single insect entry is shown in a red-bordered box. This entry includes fields for Catalog number (010213339), Location (Drawer 36), and Taxonomy (Enallagma cyathigerum). At the bottom of this box is the word 'Information'.

Plugins

Segmentation & Refining

Odonata v1

Catalog number: 010213339

Location: Drawer 36

Taxonomy: Enallagma cyathigerum

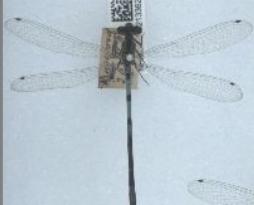
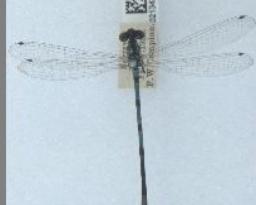
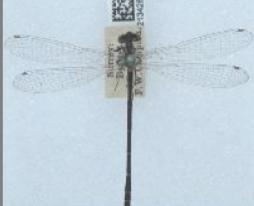
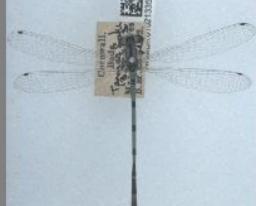
Information

Pinned Insect Drawers

File Edit View Help

Open Save Segment image Subsegment box Read barcodes Zoom In Zoom Out Choose cookie c... 84 boxes 0 selected

Boxes Objects

0010 010213435_ 	0011 010213362_ 	0012 010213421_ 
0013 010213335_ 	0014 010213428_ 	0015 010213350_ 
0016 010213339_ 	0017 010213341_ 	0018 010213330_ 

Select by size

Coccoidea v4

Catalog number
Location
Taxonomy

Information

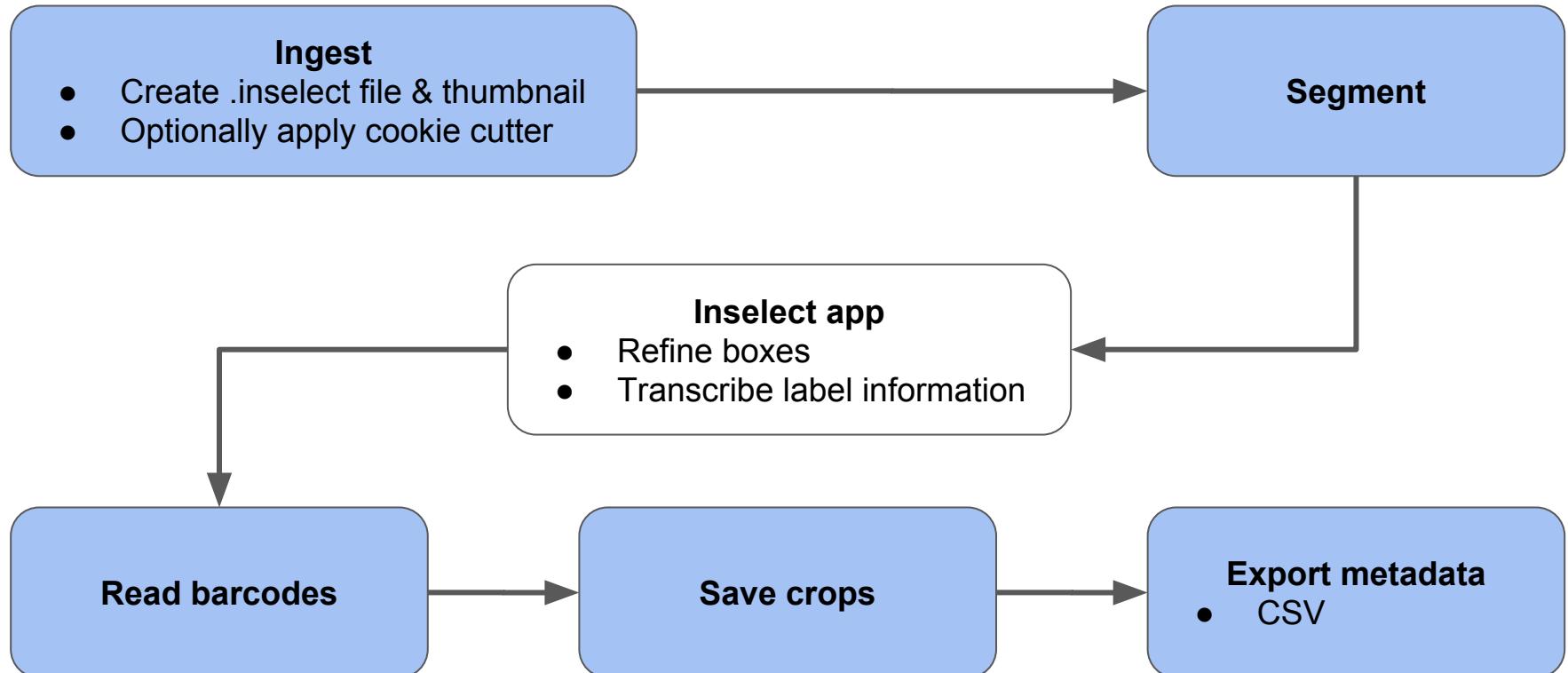
Metadata

Live Demo

1. “Insect soup” & segmentation
2. Pinned insects & user-defined metadata
3. Microscope slide templates & barcode reading
4. Cookie cutters
5. Batch-processing using command-line tools



Automated workflow



Thank-you!



<https://github.com/NaturalHistoryMuseum/inselect>

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