What could a Digital Research Cluster do for the College?

Donna Kurtz
Professor of Classical Art and Beazley Archivist
Why clusters?

✓ Promote interdisciplinary research
✓ Raise profile of the college
✓ Attract funds for scholarships
✓ Attract funds for DRC activities,
✓ *e.g.*, Workshops, Summer Schools, *etc.*
Why Wolfson?

✓ Graduate
✓ Large
✓ Arts and Sciences

Other clusters in college: transfer of benefits
CLAROS – an example of a collaboration

- Humanities
- Social Sciences
- MPLS
- Museums and Collections

- Kurtz and Shotton, GBFs
- Membership across college
OeRC is the institutional base for CLAROS

OeRC can coordinate new projects created by DRC
OII could serve this role for:

- Politics
- Economics
- e-governance
What is Digital Research?

Almost any type of research

Expressions of interest have come from:

- Medical Sciences
- Politics
- Social Sciences and Law
- Humanities
Wolfson Digital Research Cluster

Biological data management and semantic enhancements of scholarly publishing

David Shotton
Reader in Image Bioinformatics
The challenges of the biological data deluge
OpenFlyData sources: *Drosophila* gene expression data
Same data integrated in a single OpenFlyData window

### Search D. melanogaster Gene Expression Data by Gene

**gene name:** schuy

E.g. schuy, CG17736 or FBgn0036925 (case doesn’t matter)

<table>
<thead>
<tr>
<th>probe</th>
<th>tissue</th>
<th>mRNA signal</th>
<th>present call</th>
<th>enrichment</th>
<th>affy call</th>
</tr>
</thead>
<tbody>
<tr>
<td>1626032_at</td>
<td>whole</td>
<td>0.19 ± 0.79</td>
<td>4 of 4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>brain</td>
<td>1.2 ± 0.6</td>
<td>0 of 4</td>
<td>0</td>
<td>Down</td>
</tr>
<tr>
<td></td>
<td>head</td>
<td>0.4 ± 0</td>
<td>0 of 4</td>
<td>0</td>
<td>Down</td>
</tr>
<tr>
<td></td>
<td>crop</td>
<td>0.8 ± 0.2</td>
<td>0 of 4</td>
<td>0</td>
<td>Down</td>
</tr>
<tr>
<td></td>
<td>midgut</td>
<td>0.6 ± 0</td>
<td>0 of 4</td>
<td>0</td>
<td>Down</td>
</tr>
<tr>
<td></td>
<td>hindgut</td>
<td>0.6 ± 0.1</td>
<td>0 of 4</td>
<td>0</td>
<td>Down</td>
</tr>
<tr>
<td></td>
<td>tube</td>
<td>1.5 ± 0.7</td>
<td>0 of 4</td>
<td>0</td>
<td>Down</td>
</tr>
<tr>
<td></td>
<td>ovary</td>
<td>0.5 ± 0.2</td>
<td>0 of 4</td>
<td>0</td>
<td>Down</td>
</tr>
<tr>
<td></td>
<td>testis</td>
<td>1140.4 ± 36.8</td>
<td>4 of 4</td>
<td>13.9</td>
<td>Up</td>
</tr>
<tr>
<td></td>
<td>acc</td>
<td>0.9 ± 0.1</td>
<td>0 of 4</td>
<td>0</td>
<td>Down</td>
</tr>
<tr>
<td></td>
<td>l_tubule</td>
<td>0.6 ± 0.2</td>
<td>0 of 4</td>
<td>0</td>
<td>Down</td>
</tr>
<tr>
<td></td>
<td></td>
<td>testbody</td>
<td>60.5 ± 43.9</td>
<td>3 of 4</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>ta_ganglion</td>
<td>1.4 ± 0.5</td>
<td>0 of 4</td>
<td>0</td>
<td>Down</td>
</tr>
<tr>
<td></td>
<td>carcass</td>
<td>1.3 ± 0.3</td>
<td>0 of 4</td>
<td>0</td>
<td>Down</td>
</tr>
<tr>
<td></td>
<td>sgland</td>
<td>3.5 ± 1.3</td>
<td>0 of 4</td>
<td>0.04</td>
<td>Down</td>
</tr>
</tbody>
</table>

**references (flybase)**

Post-meiotic transcription in Drosophila testes. [FlyBase](http://flybase.org)

Dickson et al., 2007, RNAi construct and insertion data submitted by the Vienna Drosophila RNAi Center RNAi construct and insertion data submitted by the Vienna Drosophila RNAi Center [FlyBase](http://flybase.org)

Benson et al., 2005, A. Dros. Res. Conf. 47: 4944
The Drosophila testis gene expression database. [FlyBase](http://flybase.org)

The Drosophila testis gene expression database. [FlyBase](http://flybase.org)

Benson et al., 2004, 2.24, Helping Flybase: ADRC-10142. Helping Flybase: ADRC-10142. [FlyBase](http://flybase.org)

Benson et al., 2004, Dros. Res. Conf. 45: 3998
Epigenetic Regulation by the aly-class Mosaic Arrest Genes. [FlyBase](http://flybase.org)

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Benson et al., 2004, Dros. Res. Conf. 45: 3998
Epigenetic Regulation by the aly-class Mosaic Arrest Genes. [FlyBase](http://flybase.org)
The CLAROS Explorer classical art browse interface

The timeline shows the number of occurrences in each period. Click on the bar to show the distribution within the period or click here to view the distribution for all periods.

Distribution of heron for all time periods

Click on the marker ▼ on the map and a balloon will pop up with the site name and number of occurrences of the name found at that site.

40008233, Edinburgh Tassie, 2203, EROS HOLDING A HERON BY THE NECK AND RESTING HIS BOW ON THE GROUND, Unpublished Tassie, TRAY 35.2

40000953, Poniatowski, T915, DIOMEDE AND ULYSSES PROCEEDING AS SPIES AT NIGHT TO THE TROJAN CAMP [CONDUCTED BY THE HERON WHICH MINERVA HAD SENT TO GUIDE THEM], KROMOU, Kromos, Prendeville, J.: Explanatory catalogue of the proof-impressions of the antique gems possessed by the late Prince Poniatowski and now in the possession of John Tyrrell, Esq. (1841), 915, Cornelian

Web page search results 1 to 4 of about 4 for heron

Dexamenos - Classical gems - Gems
... 21mm. GGFR no. 467. Blue chalcedony scaraboid, from Kerch (Crimea). A flying heron. ...
A heron preening and catching a locust with his foot. Signed Dexamenos. St. ...
http://www.clarosnet.org/gems/styles/classical/dexamenos.htm - 8k - 2008-12-11

Other Claros references for this period

Pottery 102155 records
Rundplastik 37905 records
Relief 25488 records
Impact of Environment and Social Gradient on *Leptospira* Infection in Urban Slums

Renato B. Reis¹, Guilherme S. Ribeiro¹#, Ridalva D. M. Felzemburgh¹, Francisco S. Santana¹,², Sharif Mohr¹, Astrid X. T. O. Melendez¹, Adriano Queiroz¹, Andréia C. Santos¹, Romy R. Ravines³, Wagner S. Tassinari³,⁴, Marília S. Carvalho³, Mitermayer G. Reis¹, Albert I. Ko¹,⁵*
Current ‘data care’ R&D projects

- **The ADMIRAL Project**
  - helping researchers in Zoology to locally manage research data, then publishing selected datasets in the Oxford DataBank

- **The Dryad-UK Project**
  - publishing biological datasets related to peer-reviewed journal articles in the Dryad data repository

- **The Open Citations Project**
  - publishing bibliographic citations as Linked Open Data

- **Open Research Reports**
  - publishing structured summaries of infectious disease articles as open access mini-publications, to get round subscription barriers that block access to biomedical information in the developing world
Places ancient and modern

Sebastian Rahtz
Head of Information and Support Group, OUCS
The name Παράμονος
Found 9 post boxes near 25 Staverton Road

Please note that all libraries have admission and borrowing policies; inclusion in this list does not imply access.

http://m.ox.ac.uk/places/oxpoints:...
William Godwin’s Diary

Dep. e.203, fol. 25v

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Image List -- Full Image -- Diary Text

Volume List:


---

Theatre, Merchant of Venice.

Banquo calls: walk to Booth's, e.171, recall on family, Miller, 

March 23.

Folio. 10, 11. Theat. J. 19 G. 

April 14.

Festus. Perignard: Forte's calls in the evening, Mrs. S. S. M. Revele & Tuthill: J. G.
Protestants buried in Rome

PERCY BYSSHE SHELLEY
COR CORDIUM
NATUS IV AUG. MDCCXCII
OBIIT VIII JUL. MDCCXXII
Nothing of him that doth fade,
But doth suffer a sea-change
Into something rich and strange
Underlying issues

- The importance of place
- The importance of time
- The importance of people
- Multiple sources and types of data

Some answers

- Common vocabularies
- Common data formats
- Resources, not answers
The Metamorphoses Project aims

- Combine many sources of geolocation data (CLAROS, Pleiades, Yahoo, Geonames, Getty)
- Find points of commonality by name, location and date
- Model change of name and place over time
- Provide geolocation lookup service for Oxford
- Produce visualisations and mashups
- Use the same technologies and vocabularies as modern open data
## 5-star data

| ★ | Available on the web (whatever format), but with an open licence |
| ★★ | Available as machine-readable structured data (e.g. excel instead of image scan of a table) |
| ★★★ | as (2) plus non-proprietary format (e.g. CSV instead of Excel) |
| ★★★★ | All the above plus, Use open standards from W3C (RDF and SPARQL) to identify things, so that people can point at your stuff |
| ★★★★★ | All the above, plus: Link your data to other people’s data to provide context |

[http://www.w3.org/DesignIssues/LinkedData.html](http://www.w3.org/DesignIssues/LinkedData.html)
Wolfson Digital Research Cluster

A database for the Roman Economy

Miko Flohr
Assistant Director, Oxford Roman Economy Project
The Oxford Roman Economy Project

- AHRC funded first phase (2005-2010), continuing until end 2012 at least.
- Studying economic history of the Roman world through large, quantifiable datasets.
- Aims:
  - Understanding economic geography
  - Understanding change over time (growth and decline)
  - Studying local phenomena to greater depth
- Using known (and published) archaeological and textual data
The OxREP databases, an inventory:

- Roman Shipwrecks
- Roman mines
- Roman villas with multiple sets of wine and olive presses
- (all) Roman cities
- A complete inventory of the Karanis Tax Rolls
- Land property lists
- Alimenta lists
- An inventory of machines mentioned in literature
- An inventory of canals in the Roman world
- Roman coins found in India

... and (many) more to be added in the future
What we needed

- A powerful, flexible database
- A good back-end website for updating the database
- A user-friendly front-end website for browsing, searching and querying the database, including:
  - Mapping facility
  - Chart facility
  - Facility to store queries
  - References to scholarly literature
Database design: what we had...

... a quantity of databases:

- made by different people, some of whom had already left Oxford
- In different file format (acces, excel)
- With different levels of detail, complexity and accuracy
- Sometimes with internal inconsistencies
- High reliance on text fields (and thus, inevitably, many typo’s)
- Different ways of referencing
Database design

Keywords (tags)

Areas

Sites

Structures

Documents

Spaces

Transactions

Objects

Events

Bibliography

References
# Shipwrecks Database

**Browse Data**  
[Query Builder (BETA)]

**Browse by country > Turkey > Select from 47 wreck sites...**

**Show List**

## Shipwrecks List

This search returned 73 wrecks

<table>
<thead>
<tr>
<th></th>
<th>Site</th>
<th>Wreck</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Akkale</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Anatas Adasik</td>
<td>Anatas Adasik (Palapetra)</td>
<td>Unconfirmed reports from sponge divers indicate there may be as many as 4 copper ingot wrecks in the area. One of these seems to be earlier than the Cape Gelidonya A wreck.</td>
</tr>
<tr>
<td>3</td>
<td>Antalya</td>
<td>Antalya</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Arap Adasi</td>
<td>Arap Adasi</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Bodrum</td>
<td>Bodrum</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Bozburun</td>
<td>Bozburun Byzantine</td>
<td>Dating changed since Parker 1992 as the site was re-examined by the INA from 1995-98. The hull remains provide some of the earliest evidence for the arithmetical design and construction methods that later dominated ship building in the Mediterranean.</td>
</tr>
<tr>
<td>7</td>
<td>Bozburun</td>
<td>Bozburun Julia-Claudian</td>
<td>A large amphora mound measuring 15 x 5m although it is hard to discern a stacking pattern as the upper amphorae are tumbled and there is a large amount of marine growth covering the site.</td>
</tr>
<tr>
<td>8</td>
<td>Bozburun</td>
<td>Bozburun Late Antiquity anchor</td>
<td>An oval shaped amphora deposit measuring 9 x 3m with 2 collections of anchors about 4m to the west and northwest of the amphora.</td>
</tr>
<tr>
<td>9</td>
<td>Bozburun</td>
<td>Bozburun Late Republican</td>
<td>A badly damaged mound of amphorae measuring 10 x 8m, rising to 0.5-0.75m, although many are still in their upright position in the sand, suggesting that the hull may be preserved underneath.</td>
</tr>
<tr>
<td>10</td>
<td>Bozburun</td>
<td>Bozburun tile wreck</td>
<td>The site is a small mound measuring c 21 x 10m comprising both cover and pan tiles still in their stacked positions. A trail of amphorae starting about 10m from the site and continuing 600m away contains at least 3 concentrated deposits of numerous large</td>
</tr>
<tr>
<td>11</td>
<td>Bozukkale</td>
<td>Bozukkale</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Cakil Burnu</td>
<td>Cakil Burnu</td>
<td></td>
</tr>
</tbody>
</table>
| 13 | Camalti Burnu | Camalti Burnu 1        | Over an area 42m x 18m, at least 800 stamped amphorae have been found on a 25m long merchant ship that had 2 masts and a half deck. The amphora on this wreck have been dated to the thirteenth century, placing them among the last amphorae in
Wolfson Digital Research Cluster

Web-scale music analysis, linking, and life-writing

David De Roure

Professor of e-Research, OeRC
National Director of Digital Social Research, ESRC
Digital Music Collections

Crowdsourced ground truth

Community Software

Supercomputer

Linked Data Repositories

Structural Analysis of Large Amounts of Music Information
What's the score at the Bodleian?
Discussion

David Robey
Arts and Humanities Consultant, OeRC