The Digital Index of North American Archaeology (DINAA) & Open Context
Unlocking the Anthropology in Archaeology with Linked Open Data

by Joshua J. Wells, Eric C. Kansa, Sarah W. Kansa, David G. Anderson, Stephen J. Yerka, Kelsey N. Myers, R. Carl Demuth, and Thad Bissett

This presentation and all other DINAA posters and papers from other venues are available through the DINAA blog http://ux.opencontext.org/blog/archaeology-site-data
Q: What is archaeology?
A: Context (and more ...)
These data are dirty
Disciplinary Issue 2/5

Will these data change anything?
Disciplinary Issue 3/5

How can we guarantee...

... that these data are compatible?
Disciplinary Issue 4/5

What about massive data?
Archaeologists explore Peruvian ruins with semi-autonomous drones

Unmanned aerial vehicles (UAVs) aren't just used by terrorists in Yemen. Archeologists from Vanderbilt University, using the sophisticated flying drones to map the Andes Mountains of Peru from the skies.

The aerial scientific maps they are making with digital video footage are complex, ancient ruins are coming together, quickly, and are leading to more discoveries about ancient cultures in the coming decades, scientists tell FoxNews.com.

"With the UAV, we can fly over the site and capture the required imagery in about 10 minutes," Steve Wernke, an archeologist at Vanderbilt, who just completed photography of a site in Mawchu Llacta, a colonial town from the 1570s in the Andes, tells FoxNews.com. "Mapping a site of this scale would require about three entire field seasons and additional time during the winter season."

"As UAVs become more prevalent, they appear to be an increasingly cost-effective means of archaeological mapping."

Gizmos have emergent data needs
Discover Artifacts and Information Geographically through Pelagios

Pelagios is a collaborative effort involving over 30 scholarly websites about ancient art, archaeology, history, and literature. It is co-organized by scholars at the Open University, the University of Southampton, and the Austrian Institute of Technology. Participating projects use data from the Pleiades gazetteer to connect their contents geographically, making it easier for users to find information related to individual places in the ancient world.

The Pelagios heat map on this page can be zoomed and panned to focus on an area of interest. A single mouse click launches a popup for the closest place. "References" links on the popups will take you to pages on the Pelagios site summarizing the data available and giving you links to corresponding records on each partner project's site. You can also use the search box in the upper right-hand corner to find places on the map by name.

Pelagios phases 1 & 2, dedicated to classical antiquity (Greece and Rome) were funded by Jisc. Pelagios 3, which extends the methodology to cover medieval Christian, Islamic, and Asian geography, is funded by The Andrew W. Mellon Foundation. You can read more about the scholarly functions of the project via "Pleiades and Pelagios: Organizing Ancient Geography on the Web." Work in progress is discussed on the Pelagios Project Blog.
ARIADENE brings together and integrates existing archaeological research data infrastructures so that researchers can use the various distributed datasets and new and powerful technologies as an integral component of the archaeological research methodology. There is now a large availability of archaeological digital datasets.
Welcome to the Portable Antiquities Scheme website

The Portable Antiquities Scheme is a DCMS funded project to encourage the voluntary recording of archaeological objects found by members of the public in England and Wales. Every year many thousands of objects are discovered, many of these by metal-detector users, but also by people whilst out walking, gardening or going about their daily work.
Existing Infrastructure 4/7
Existing Infrastructure 2/7

Welcome to the ADS website. There are a number of features of the website that will make it easier and more enjoyable to use. Please read the 'About' this site section for more details. This site works best with the Firefox, Chrome and Safari browsers. Why not register as a myADS user to take full advantage of the additional features. On registration these personal myADS features become available.

Workbook
Using the tools at the bottom of each page save your favourite resources and regular searches in the myADS Workbook.

History
Your recent exploration of the site and the archives is automatically saved in your myADS History.

Additional services
Registered ADS users can take advantage of a number of additional myADS services, such as tailored email alerts and download of configurable results sets.

Featured collection
Newport Medieval Ship

October 2014: Digital Data Re-use Award
Internet Archaeology and the Archaeology Data Service have teamed up to provide an Award that recognises the outstanding archaeological research being carried out through the re-use of digital data. The Digital Data Re-use Award offers archaeological researchers the chance to promote their work and win the opportunity to publish, free of charge, in the premier open access journal Internet Archaeology.

October 2014: ADS Update: Issue 5
Issue 5 of ADS Update is now out. With articles on Internet Archaeology Going Open Access, our new Digital Data Reuse Award, the new ADS Guidelines for Depositors, and an update on the HERALD project as well as much more.

October 2014: Marie Curie post doctoral fellow Fabrizio Galeazzi joins ADS and the Centre for Digital Heritage
This term ADS are pleased to welcome Fabrizio Galeazzi, a new Marie Curie post doctoral fellow, who will be working with us and Centre for Digital Heritage. Fabrizio comes to York having received a BA and MA in Archaeology at the University of Rome "La Sapienza," specializing in Late Antiquity and Medieval Archaeology, and a PhD in World Cultures/Heritage at the University of California, Merc...
FAIMS Mentioned in Intersect Monthly Newsletter

Posted on 2 July 2014 by Brian Ballsun-Stanton

FAIMS was featured in Intersect’s monthly bulletin with a lovely short summary of our project:

"The FAIMS application has the capability to radically improve the workflow of archaeology. The Federated Archaeological Information Management System (FAIMS) includes an Android application and Ruby server built by Intersect. It is a comprehensive information system, built for the digital collection and management..."
What can you dig up?
The Digital Archaeological Record (tDAR) is your online archive for archaeological information.

Access & Use
Broadening the access to archaeological data through simple search and browse functionality.

Contribute
Contribute documents, data sets, images, and other critical archaeological materials.

Preservation
Dedicated to ensuring long-term preservation of digital archaeological data.

Who Uses tDAR
Researchers like you. Uncover knowledge of the past, and preserve and protect archaeological resources.
Welcome to Open Context

Open Context reviews, edits, and publishes archaeological research data and archives data with university-backed repositories, including the California Digital Library.
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Content Map and Timeline

As part of the Dave Mountain Groundstone project: Aitai Ridge
[Click here] to browse in this project.

Timeline and mapping credit: Timemap.js library by Nick Rabinowitz using Timeline by the SIMLE Project.
### Item: Object 427  
**Class:** Groundstone  

#### Context (click to view):  
United States / Arizona / Desert Tortoise / Feature 1

#### Descriptive Properties (16)

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<th>Variable</th>
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<td>Context</td>
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<td>Use</td>
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<td>Sequence</td>
<td>sequential</td>
</tr>
<tr>
<td>Wear</td>
<td>heavy</td>
</tr>
<tr>
<td>Designed Activity</td>
<td>Food processing</td>
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<td>Actual Activity</td>
<td>Food processing</td>
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<td>Rock Type</td>
<td>-</td>
</tr>
<tr>
<td>Time Period</td>
<td>A.D.500-1150</td>
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</tbody>
</table>

#### Item Notes

Data presented in this project primarily concern ground stone finds. More complete documentation of sites, archaeological features, research methods, etc. can be obtained from Sirsch 2008. Raw data and the artifacts are stored at the Arizona State Museum.

#### Linked Persons / Organizations (1)

- Jenny Adams, Principle Author / Analyst

#### Project Editorial Status

- Editorial board reviewed

#### Suggested Citation


#### Mapping Data

[Google Map of Site Location]

#### Editorial Description (1)

600 CE - 1150 CE

Editor's Note: Date ranges are approximate and do not necessarily reflect the opinion of data contributors. These dates are provided only to facilitate searches.

#### Downloadable Tables with this Item

Dove Mountain Groundstone

#### Linked Media (2)

- [Image 1]
- [Image 2]
Welcome to Open Context
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Content Map and Timeline

As part of the Kenan Tepe project, Turkey contains 45642 items.
[Click here] to browse in this project.
A trench is the projection of a 2D square or rectangle onto some small portion of an Area. This projection is usually excavated vertically, leaving a one-half meter space between the vertically excavated space and the edge of the trench so that a standing section, or balk, is left as a record of the trench stratigraphy. Generally speaking, trenches fit into the north-south grid established on the site. The exception is where the site topography does not allow a trench to be oriented to the cardinal points. Trench corners were located using a total station and secured with cement. The location of all excavated material within a trench was measured relative to the actual (cemented) corners of the trench. Various sized trenches were excavated at Kenan Tepe including 1 x 1 and 2 x 2 meter soundings and 3 x 5, 6 x 5, 8 x 10 and 10 x 10 meter trenches. One or two students were typically placed in control of a trench as "trench supervisors." Trenches also typically had between 1 and 4 local laborers. Area supervisors oversaw trenches in each area. Trench supervisors were responsible for recording the excavation and for directing the local laborers. This included keeping a daily journal that recorded observations and activities in each trench, drawing daily plans showing the location of excavated contexts, taking photographs and issuing loci and finds bag numbers. Area supervisors oversaw excavation and sampling strategies and guided trench supervisors in excavation procedures and interpretation.
WHAT IS DINAA?

- ontology & index for linked data
  - heuristic potential
  - regional geospatial potential
- communication process
  - agencies
  - researchers
  - educators
  - publics
- DINAA uses
  - open source software and principles
  - public revisions
  - data as they exist (and adds value)
#OpenGov #OpenSci Base Data of DINAA
DINAA in Practical Context

Dot Density of 20 km grid of Archaeological Resources
- 1 Dot = 5 Archaeological Sites
Total sample = 478,471 Archaeological Sites
DINAA Partner Status

1. Data and Structure Submitted to DINAA

Kilometers
- where do these data originate?
- what kinds of data are these?
DINAA & LINKED DATA (record)

- DINAA data
- stable URIs
- sites
- traits
- concepts
- updates
- links & citations
- link back
- publications
- imagery
- online data
DINAA & LINKED DATA (ontology)

- DINAA data
- stable URIs
- sites
- traits
- concepts
- updates
- links & citations
- link back
- publications
- imagery
- online data
### Descriptions (5)

<table>
<thead>
<tr>
<th>Descriptive Variable</th>
<th>Value(s)</th>
</tr>
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</table>
| Culture               | Paleoindian, 10000 B.C.-8500 B.C.  
Archaic unspecified  
Early Archaic  
Archaic-Late  
Elliot's Point  
Deptford 700 B.C.-300 B.C.  
Santa Rosa-Swift Creek  
Weeden Island A.D. 450-1000  
Weeden Island II  
Mississippian  
Fl. Walton A.D. 1000-1500  
Pensacola  
American 1821-present  
Prehistoric-Ceramic  
Other |
| Site Type             | Artifact scatter-low density  
Features-subsurface  
Prehistoric midden(s)  
Village (prehistoric)  
Shell midden (prehistoric)  
Burial mound (prehistoric)  
Land-terrestrial  
Limited activity (prehistoric) |
Now: Large-Scale Assessment
Now: Grey Literature
Connections
Future: Integration w/ Scientific Corpus
