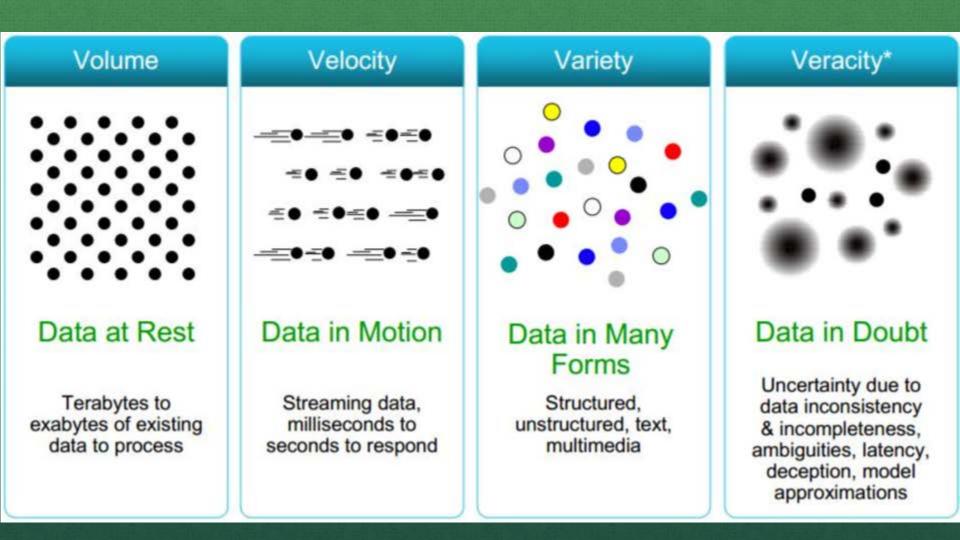
Open Data Perspectives and Problems: An Archaeological Perspective

Presented in: Sharing is Caring: Challenges and Opportunities in Producing Open Data

> Lynne Goldstein Professor of Anthropology Michigan State University







Volume: Archaeological data represent a large volume, but not when compared to physics or medicine Velocity: Archaeologists do relatively little data streaming, so velocity is not one of our problems Variety: In this area, we beat almost every other discipline Veracity: Another big area for archaeologists because we use "messy" data that is not structured and often not comparable

Legacy Data

- Messy
- Not disciplinarily structured
- Long time depth data collected 150 years ago can be very significant

Data Sensitivity: A Huge Issue

- Most people unaware that archaeological data are sensitive
- Site files exempt from Freedom of Information Act requests
- Compliance work
- Ownership of data
- Legal issues

Are There Ways to Share or Open Archaeological Data?

Examples

Preservation Depositories

Find & share research

As a repository for digital data, tDAR contains a vast amount of resources and tools that can enrich your ongoing research.

- · Search our expansive database of documents, data sets, images and more.
- · Integrate your data with data from other projects.
- Collaborate with other researchers

LEARN MORE



Preserve & protect data



The core mission of tDAR is to support better stewardship of the documents and data produced during research.

- + Manage all of your archaeological data in one place.
- · Organize your resources.
- · Download reports or bibliographies.



Extend your classroom

As a discipline-specific archive of archaeological documents, tDAR is dedicated to the teaching of archaeology.

- . Use reports, documents, data sets and images in classroom assignments and lectures.
- + Find reports and grey literature from investigations from around the world.
- · Compare different data sets and analyses.





Meet Your Legal Obligations



Use tDAR to meet legal obligations to preserve and provide access to digital archaeological files, which mandate that data generated by federal agencies must be deposited in a repository capable of:

- + Providing long-term digital curation;
- . Ensuring preservation of the digital files; and
- Facilitating accessibility to qualified users.

TDAR: The Digital Archaeological Record

LEARN MORE



INNOVATE

Supporting research, learning and teaching with free, high quality and dependable digital resources

Welcome to the new ADS website. There are a number of new 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 favourile resources and regular searches in the myADS Workbook.

History

ads

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

Sutton Park LiDAR, air photo, ground & palaeoenvironmental data

August 2015: Cumberland and Westmorland Antiquarian and Archaeological Society Transactions

ADS and the Cumberland and Westmortand Antiguarian and Archaeological Society are pleased to announce the release of the Cumberland and Westmortand Antiguarian and Archaeological Society Transactions. The collection contains all of the Transactions volumes published from 1874 up to 2006, with the years 2007-2014 articles available in Astarbact form. The Cumberland and Westmortand Antiguarian and A... more.

August 2015: Digital Data Re-use Award 2015

July 2015: Internet Archaeology awarded the Directory of Open Access Journals Seal

Internet Archaeology is delighted to announce that they have been awarded the Directory of Open Access Journals (DOAJ) Seal. The DOAJ only award the seal to "journals that adhere to an exceptionally high level of publishing standards and best practice".

July 2015: York to head world-leading digital creativity centre

The University of York is to lead an £18 million Digital Creativity (DC) Hub which aims to spark a revolution by hernessing cutting edge research in digital games and interactive media to benefit society. Research will include developing ways to improve engagement with digital archives and digital assets for heritage sites and archaeologists!

ADS: Archaeology Data Service, Great Britain





University of York legal statements | ADS terms of use and access | Cookies

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THE UNIVERSITY of York



Examples

Open Data



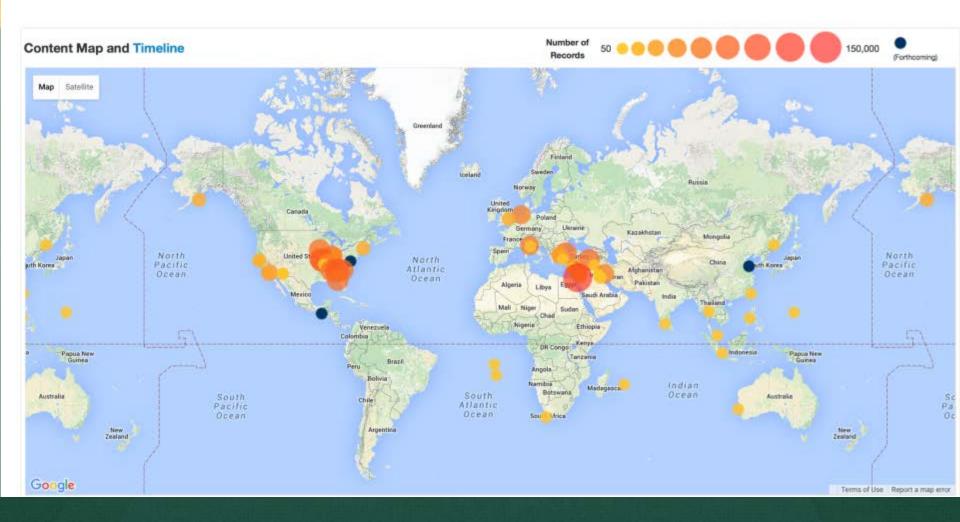
Search

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.



0



Example

DINAA: Digital Index of North American Archaeology

Digital Index of North American Archaeology (DINAA)

The Digital Index of North American Archaeology (DINAA) is a multi-institutional undertaking to create interoperability models for archaeological site databases in the eastern United States. The 2-year project, which is funded by the National Science Foundation, commenced September 1, 2012. View the technical proposal.



SUBSCRIBE

Blogroll

Plugins Suggest Idea

Themes

Documentation

Support Foru

WordPress B WordPress P

This page provides ongoing information about the progress of the project. Visit the links below to learn more about this project. We

also broadcast updates to the community via the NASA (National Association of State Archaeologists) listserv. We welcome your questions, comments, and other participation in this project, so please comment on the blog posts or contact us directly by emailing project Pis David Anderson and Josh Wells.

- Project Overview (Aug. 6, 2012)
- Initial Announcement (Aug. 7, 2012)
- Initial Communication with the National Association of State Archaeologists (NASA) (Aug. 24, 2012)
- Sensitive Data Security Measures and SHPO Collaboration (Aug. 24, 2012)
- Data Transfer Instructions (Oct. 31, 2012)
- Second Communication with the National Association of State Archaeologists (NASA) (Nov. 2, 2012)
- DINAA Annual Report (October 2013)
- Florida and Georgia Site Files Launch DINAA Project (December 2013)
- Program for the DINAA Workshop at the University of Tennessee, Knoxville (March 19-20, 2014)
- Explore a draft release of the data, updated in August 2014 with Alabama and Virginia site file records

Additional Project News and Updates:

DINAA @ SAA



The DINAA project had a very successful reception at the 79th Annual Society for American Archaeology conference in Austin, TX last month. With several presentations spanning traditional conference papers, posters, and a lightning talk at the Digital Data Interest Group meeting, conference-goers were provided with no shortage of opportunities to learn about multiple aspects. of [...]

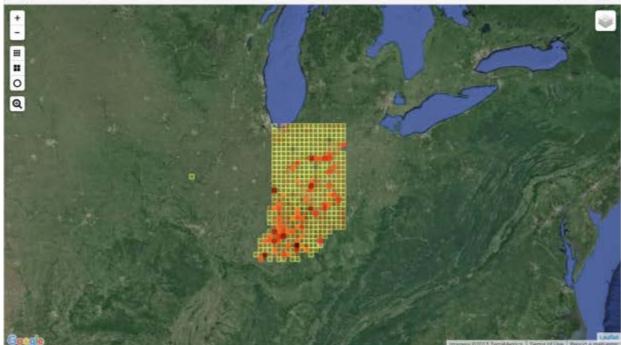
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	Greece
	Israel/Palestine Linked
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	experience user
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	zooarchaeology

Site RSS Feed

DINAA Search for Indiana Archaeological Sites

Map of Counts by Region

38,353 records



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Search results 1 to 20 of 38,353

1 Search Results						
Item Label	Project	Context	Category	Early (BCE/CE)	Late (BCE/CE)	Thumbnail
	2012/2014/2014		Service Service Services			Not call to be available

Linked Open Data

Is this a solution for the problems of managing and sharing archaeological data?

Documentation

- Different excavation methods bring differing documentation
- Comparison of different documentation sheets

LAYER AND ARBITRARY LAYER	DESCRIPTION
I. CONSISTENCY OF SOIL	
2. COLOUR	
3 TEXTURE	
4. BEDDING	
S. INCLUSIONS	
5 POST-DEPOSITIONAL FEATURES	
7. BASALBOUNCARY	

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Linked Data - Connect Distributed Data across the Web

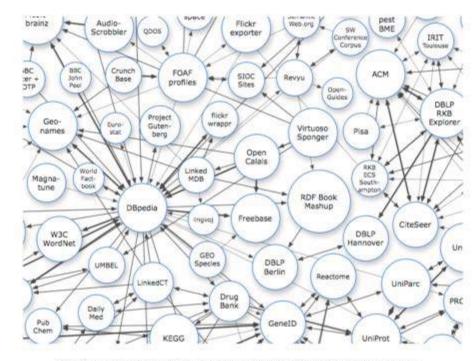
Home

- Guides and Tutorials
- Frequently Asked Questions
- Glossary
- Images and Posters
- **9** Presentations
- 9 Data Sets
- O Tools
- Events
- Calls for Papers
- Research
- News and Blogs
- O Domains
- See Also

Linked Data

Linked Data is about using the Web to connect related data that wasn't previously linked, or using the Web to lower the barriers to linking data currently linked using other methods. More specifically, Wikipedia defines Linked Data as "a term used to describe a recommended best practice for exposing, sharing, and connecting pieces of data, information, and knowledge on the Semantic Web using URIs and RDF."

This site exists to provide a home for, or pointers to, resources from across the Linked Data community.



Part of the Linking Open (LOD) Data Project Cloud Diagram, click for full and historical versions...



Login to edit (authorised users only at present)



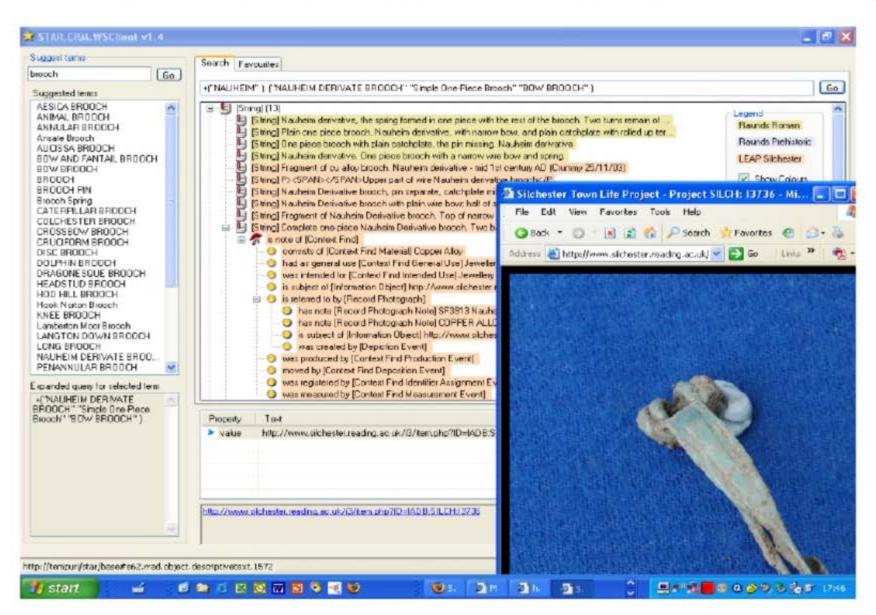
Navigation

Syndicate

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About this Site

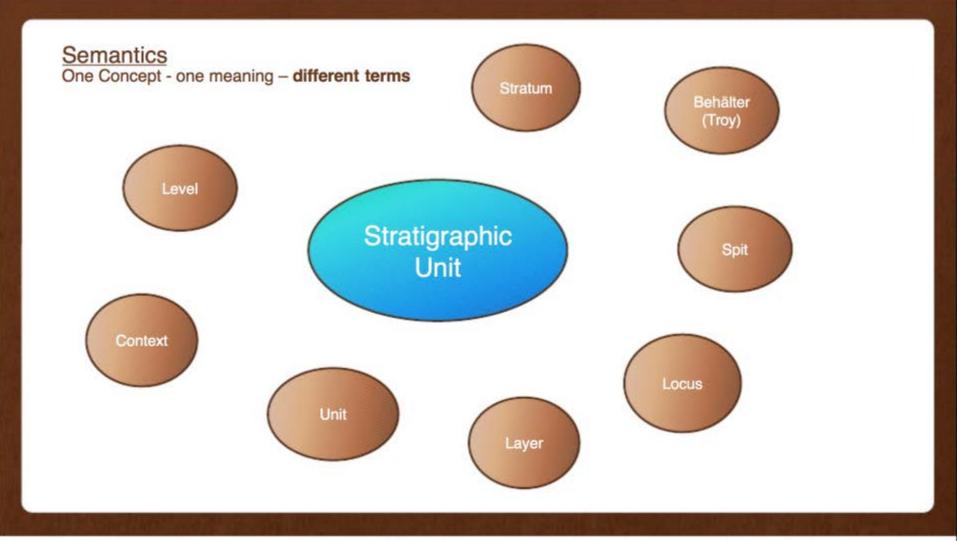
Prototype Controlled Vocabulary searching



What about comparing records across different countries?

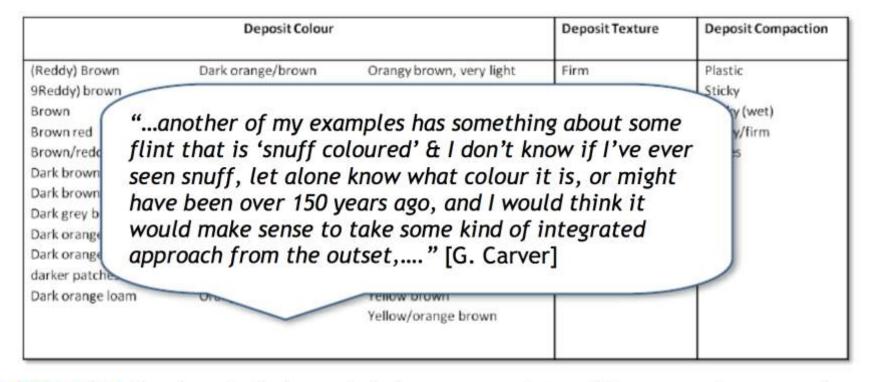
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Barrier: Semi-controlled vocabularies...



For data entry: Semi-controlled vocabularies represent a useful compromise somewhere between descriptive & controlled vocabularies, the best of both worlds!

For data retrieval: The worst of all worlds (Re. find all the iron age post holes)

This problem arises from trying to do two different things within a single input field. Should do both, but separately – 1) describe using free text description fields, and 2) index using controlled index fields

LOD Heritage Vocabularies: http://www.heritagedata.org

Vleritage Data

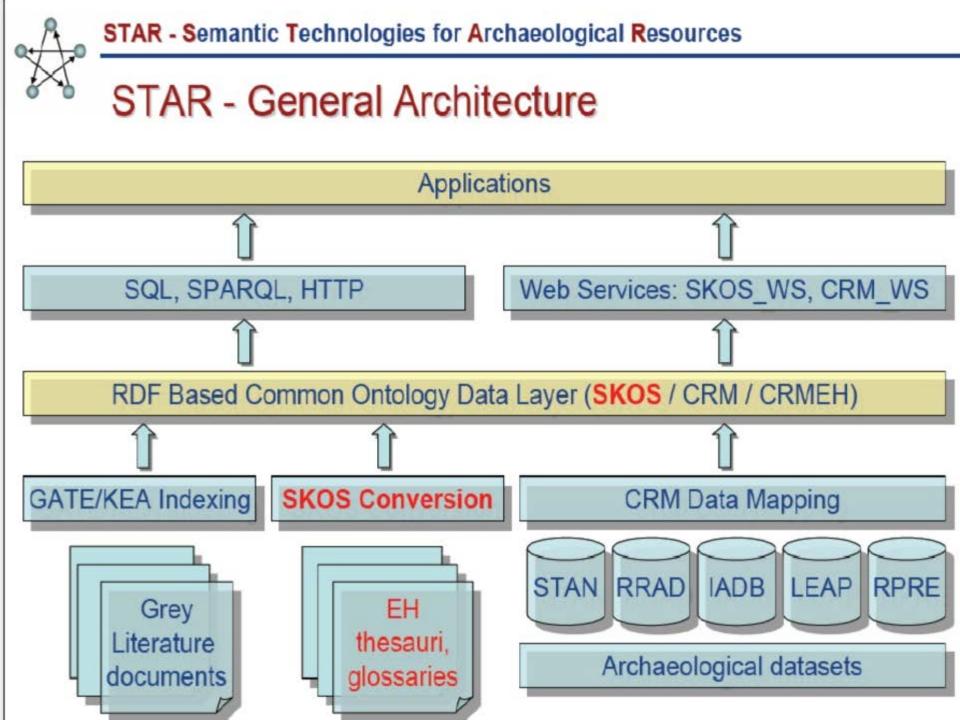
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a useful form

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Indevinant



Example: Aztalan

 Aztalan – a prehistoric archaeological site in Southern Wisconsin dating AD 800-1200.

 Has been examined and excavated by both amateur and professional archaeologists for over 175 years



The Aztalan Site [47 JE001] Jefferson County, Wisconsin

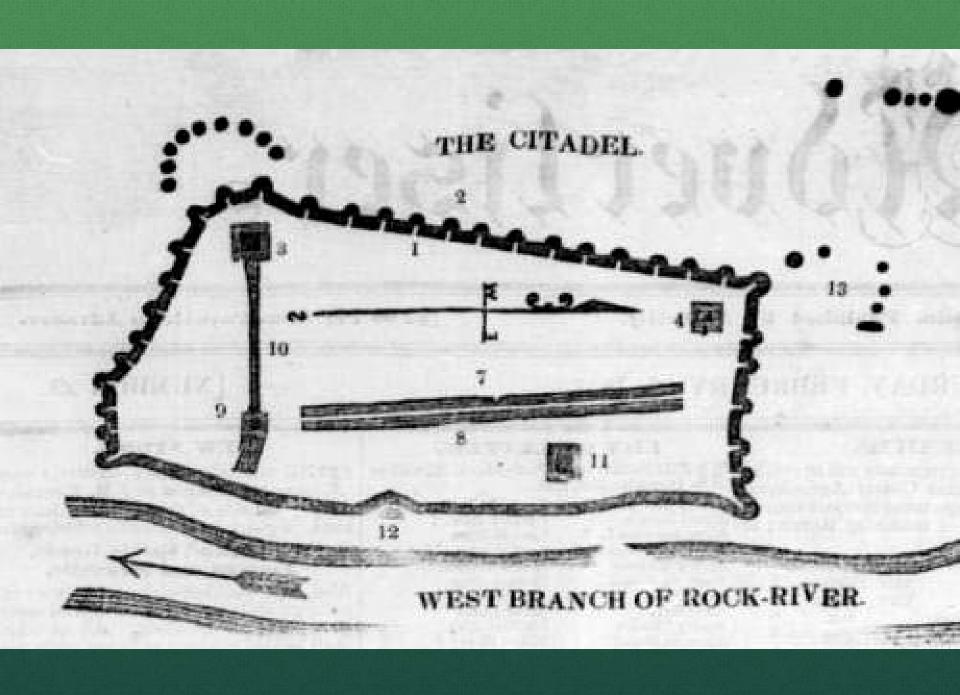
Location of Aztalan State Park

AZTALAN NATIONAL HISTORIC LANDMARK

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Aztalan - Looking west

Aztalan – looking south

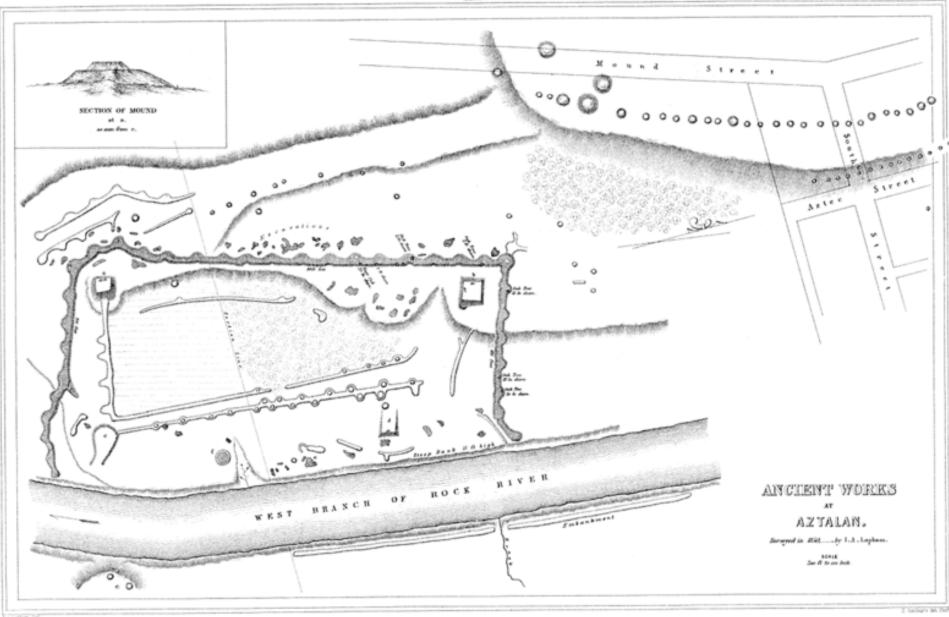


WATERTOWN CHRONICLE.

VOL. IV.-NO. 32.

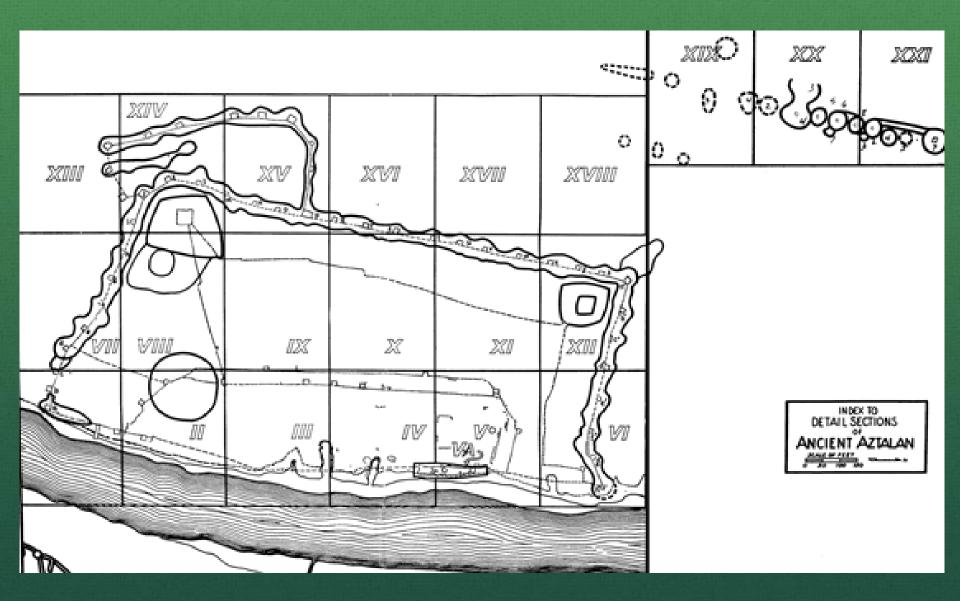
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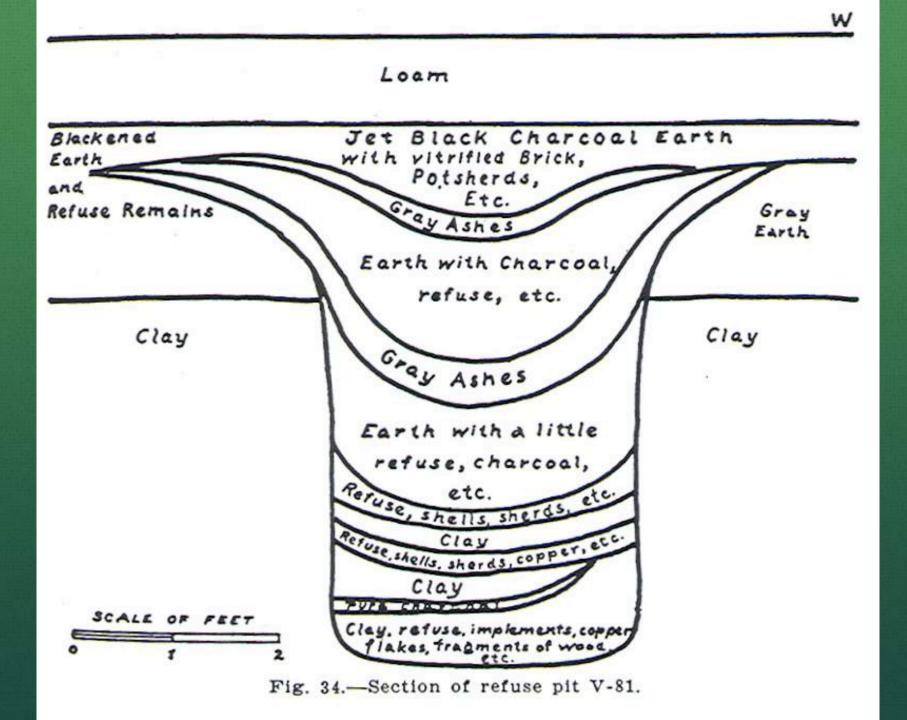
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XARIV.

mation July 6 - 1850 Den tin When at Astalan , examing trunezy the ancient works, I was informed that you had made some investigations there in former times; and wishing to ascertain . all the facts respecting there interestry remain I take the liberty of asking you to give me an account of the results of your examinations and reflections. Did you find the remains of cloth ! Are the works in your opine which of defense - and for what reasons? I Generally which the traceine for any communicate on the subject I find Judge Hyper original make requires nome corrections - additions. I shall present a the practice a thorough and additions. and conect one. your truly I. A. Lapham Geo. Aver.





Some examples of Aztalan ceramics









Chipped stone hoes

Projectile points or "arrowheads"





Ground stone axes



Discoidals or gaming stones



Ground stone pendant



Sandstone abraders



Animal bone





Animal bone made into artifacts



Shell beads; shell from Florida coast

Mussel shell hoes





Copper tools; Lake Superior copper

Copper maskettes

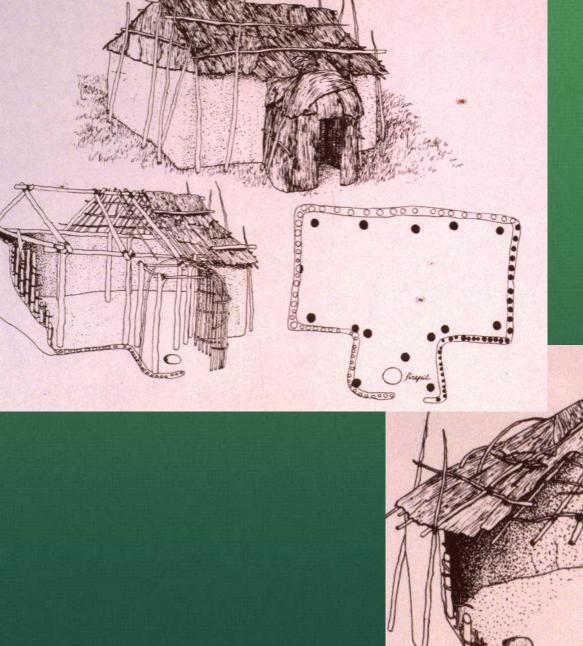




"Aztalan brick"

Charred corn kernels



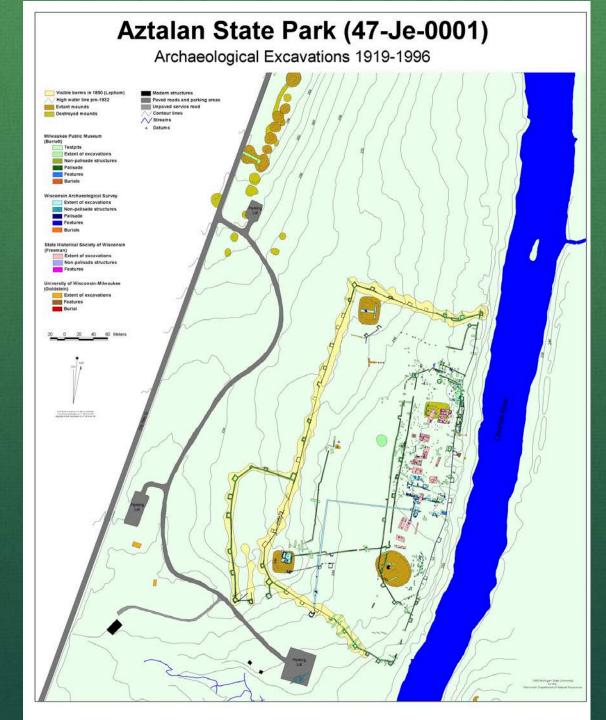


Aztalan houses

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Aztalan GIS showing all excavations through 1996

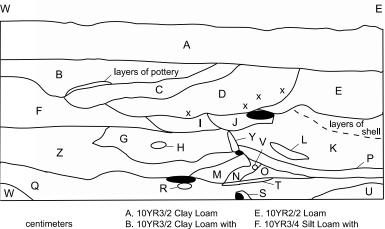




Test Pit 3 North Profile







flecks of charcoal

gravel

C. 10YR4/3 Sand with fine

D. 10YR3/2 Clay Loam with

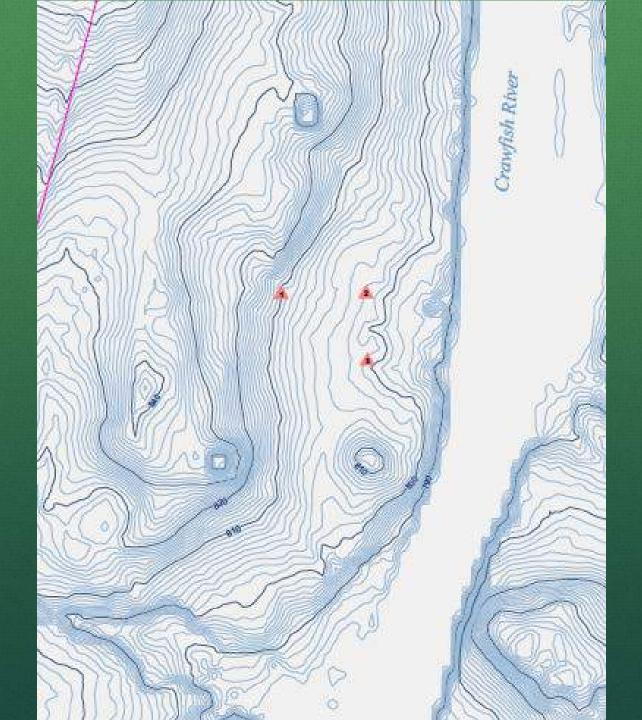
10YR3/4 sand mottles (x)

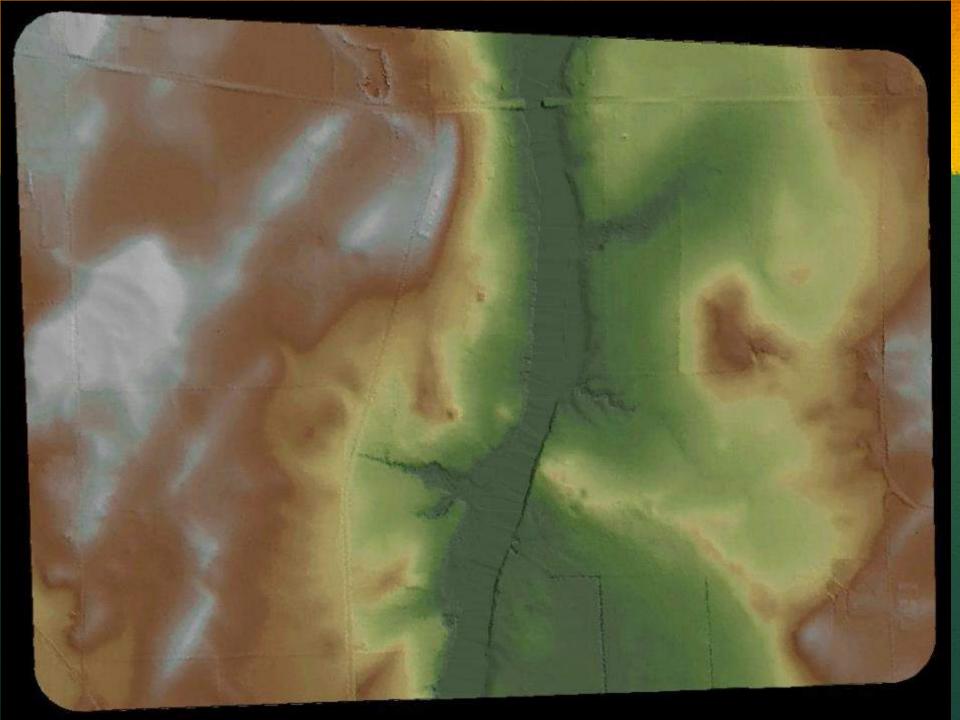
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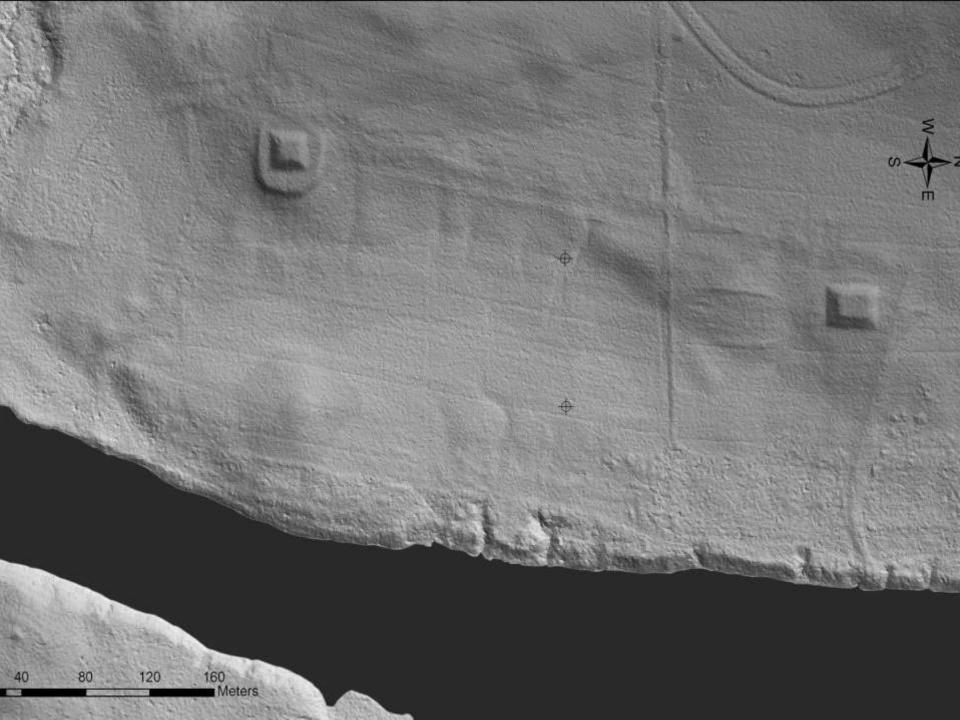
= rock

- F. 10YR3/4 Silt Loam with large mottles of 10YR6/8 clay; mussel shell scattered throughout
- G. 10YR3/1 Silty Clay Loam with thin layers of other soils

- H. 10YR3/4 Sand
- I. 10YR3/3 Clay Loam
- J. 10YR5/3 Clay with shell K. 10YR3/3 Silty Loam
- L. 10YR5/4 Clay Loam
- M. 10YR3/2 Clay
- N. 10YR4/3 Sand
- O. 10YR3/3 Silt Loam
- P. 10YR2/1 Silty Clay Loam with thin layers of soils of different colors
- Q. 10YR4/3 Silty Clay Loam
- R. 10YR3/4 Sand
- S. 10YR2/1 Silty Clay Loam T. very mottled layer with sand that is 10YR5/4,
- Clay that is 2.5YR2.5/3, Clay that is 10YR6/3, and Clay Loam that is 10YR4/2
- U. 10YR2/1 Silty Clay Loam
- V. 2.5YR6/2 Silty Clay Loam
- W. 10YR33 Sand with some
- charcoal
- Y. 10YR4/4 Sand
- Z. 10YR6/3 Clay with lots of mussel shell







Sample Name	Measured C14 Years (Years RCYBP)	Mean Calibrated C14 Years (BP)	Error +/- (Years)	Upper Limit (Cal BP)	Lower Limit (Cal BP)	Mean Calibrated Year AD	Lower Age Limit (AD) - 2 sigma	Upper Age Limit (AD) – 2 sigma	Material dated Context
GK1 Beta-374816	860	742	26	795	690	1210	1155	1260	Charcoal – AMS Unit 4, Fea 4a
GK2 Beta-374817	190	150	75	300	0	1800	1650	1950	Carbonized wood – AMS – Unit 3, PM2
GK3 Beta-374818	120	140	70	280	0	1810	1670	1950	Carbonized wood – AMS – Unit 3, PM2
GK4 Beta-374819	960	855	35	925	785	1095	1025	1165	Wood: Radiometric Unit 2, Fea 2
WP1 Beta-374821	960	860	35	930	790	1090	1020	1160	Charcoal – AMS Unit 25, Fea 101
WP2 Beta-374822	910	820	45	910	730	1130	1040	1220	Charcoal – AMS Unit 25, Fea 101
WP3 Beta-375567	960	860	35	930	790	1090	1020	1160	Charcoal – AMS Unit 24, Fea 103

TABLE 4. Aztalan 2013 Gravel Knoll and West-of-Palisade Radiocarbon Samples

*Dates reported as radiocarbon years before present consider the year 1950 to be the 'present' date.

*Upper and lower age limits are calculated as the two-sigma standard deviation of the calibrated radiocarbon age.

The Future

Teach to the Next Generation



CHI: Cultural Heritage Informatics

CULTURAL HERITAGE INFORMATICS initiative

FELLOWSHIP PROJECTS **FIELDSCHOOL** BLOG ABOUT

Cultural Heritage Informatics Initiative

Hosted and administered by the Department of Anthropology in partnership with MATRIX: The Center for Digital Humanities and Social Sciences at Michigan State University, The Cultural Heritage Informatics Initiative is a platform for interdisciplinary scholarly collaboration in the domain of digital cultural heritage. In addition, the initiative strives to equip students with the methodological skills necessary to creatively apply information, communication, and computing technology to cultural heritage materials, questions, and challenges.

learn more about the CH initiative a

from the Cultural Heritage Informatics blog;

Cultural Heritage and Politics: Dealing with the Closure of the Illinois State Museum

Ormsher 13, 3015 | Millio Style

On October 1at the Illinuit's State Museum (ISM), and its affiliance, closed its doors to the public. The staff is still going to work, that no one is able to viait the 138 year-old museum system. I have spent the past three summers working as a graduate assistant on the Monton Village Anthaeological Project, an ungoing collaborative research project between MSU and the Dickson Mounds Musicum (DMM), an affiliate of the Illinois State Museum. Since 2008, Dr. Jodje O'Gorman, Chair of the Anthropology Department and Associate Professor at MSU, and Dr. Michael Conter, Associate Curator of Anthropology at DMM, have trained undergraduates and volunteers in excavation and laboratory techniques at the Morron Whage site, focated within 2 miles of the DMM.



Current and Recent CHI Projects



Nkwejong

The Lansing area has a long and deep history of use by hative communities in the Great Lakes. While there were only a few permanent hobitations in the name of some these sets is estimated



Visualizing Southern Television

Between 1942 and 1960s, television networks spread across the United States like wildline. "By 1954, more than 40 million sets were around."



Cuboriente

The Cuboriente website project is dedicated to a digital image mapping of Africa-Impired religio-cultural heritage in the eastern. Oriente region A Caller



Virtual Black Romulus Cultural Heritage Map

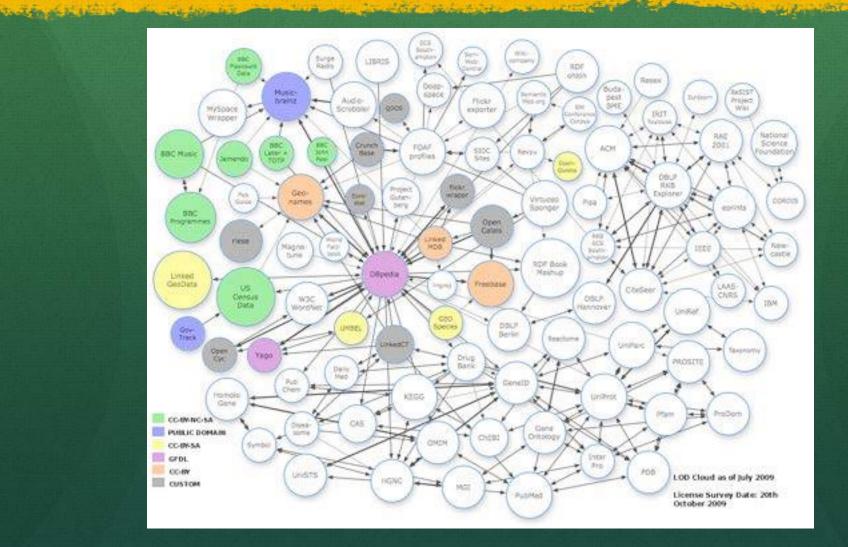
Digitizing and preserving African American history and heritage is an important mission in the digital age.

MSU Campus Archaeology Program



Think About Data Differently

a total set



Credit for Publishing Data



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Tank Strate Day Bar

Project: San Diego Archaeological Center Collections maintained t

Collections maintained by the San Diego Archaeological Center

Number of Views: 3591

Search

San Diego Archaeological Center. 'San Diego Archaeological Center: Downiew/ (Helasaed 2010-02-02). San Diego Archaeological Center (Ed.) Open Context. chtp://spencontext.org/projects/3FAAA477-6572-4806-8DC1that so the same that

Project / Collection Overview

The San Diego Archaeological Center (SDAC) is a nationally recognized leader in the curation of archaeological collections, curating collections for the Department of Defense, City of San Diego and private parties. The Center accepts for accession archaeological collections to preserve in perpetuity for the benefit of the public. The Center is dedicated to making the collections available to the public as a cultural resource through educational programming and exhibits, research projects, tours, volunteer opportunities, student internships and cultural use.

This sample of SDAC collections published in Open Context represents only a portion of the overall collections managed by the SDAC.

For more information, please visit the SDAC Website.

Suggested Citation for this Project Overview:

San Diego Archaeological Center. "San Diego Archaeological Center: (Overview)" (Released 2010-02-02). San Diego Archaeological Center (Ed.) Open Context. http://opencontext.org/projects/3FAAA477-5572-4805-8DC1-CA284FE1FC10

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2	Context	105 items contained in this category.
12	Site	49 items contained in this category.
0	Groundstone	46 items contained in this category.
	Reference Collection	17 items contained in this category.
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SDI-17428

Project Editorial Status

· · · · · Peer reviewed

Suggested Citation

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140 items contained in this. SDI-16915 context. Dating between: 1950 to 2015 122 items contained in this CA-SDI-16505 context. Dating between: 1950 to 2015 83 items contained in this CA-SDI-16690 context. Dating between: 1950 to 2015 40 items contained in this SDI-16436 context, Dating between: 1950 to 2015 29 items contained in this SDI-10438 context. Dating between: 1950 to 2015 18 items contained in this SDI-17204

18 items contained in this context. Dating between: 1950 to 2015 12 items contained in this context. Dating between: 1950