

XML in Application

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UC Berkeley / OpenContext.org



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“How I learned to
stop worrying
and love the
Web (and XML)”





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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DIPIR (<http://www.dipir.org>)

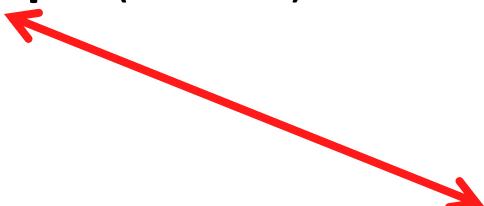
- 3-Year project, Oct. 2010-Sept. 2013
- National Leadership Grant from the Institute for Museum and Library Services (LG-06-10-0140-10)
- Ixchel Faniel (PI), Elizabeth Yakel (Co-PI)

Raw Data Can Be Unappetizing

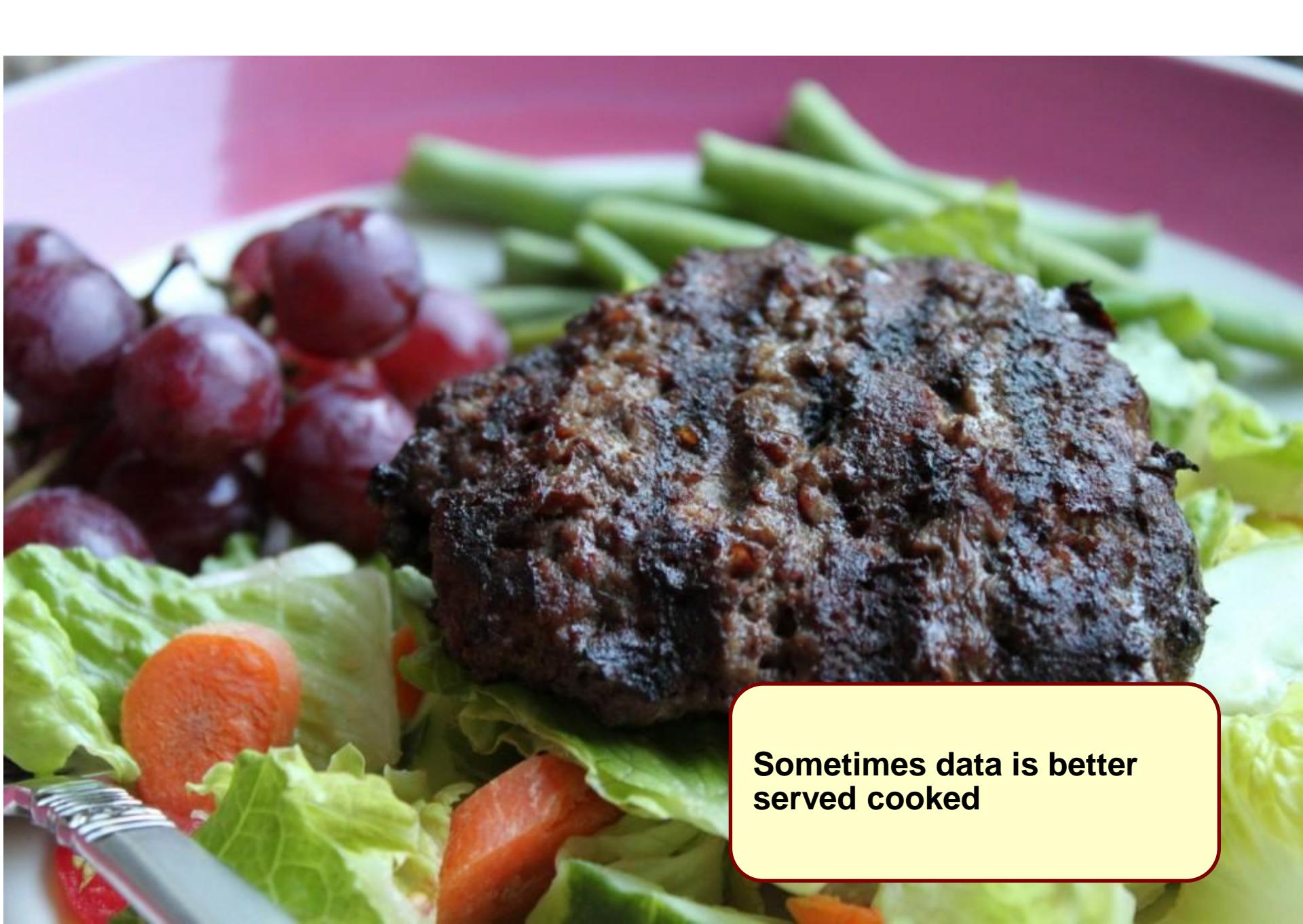


DIPIR: Data Documentation Practices

I use an Excel spreadsheet...which I ... inherited from my research advisers. ...my dissertation advisor was still recording data for each specimen on paper when I was in graduate school so that's what I started ...then quickly, I was like, "This is ridiculous."... I just started using an Excel spreadsheet that has sort of slowly gotten bigger and bigger over time with more variables or columns...I've added ...color coding...I also use...a very sort of primitive numerical coding system, again, that I inherited from my research advisers...So, this little book that goes with me of codes which is sort of odd, but ...**we all know that a 14 is a sheep.**" (CCU13)



A long way to go before we get usable, intelligible data



**Sometimes data is better
served cooked**



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Projects and Collections

Each project represents a specific study or research effort conducted by a single investigator or a team of collaborating investigators. The data and documentation presented in a project can be freely used and referenced by the research community and public for re-analysis, comparison with other collections, visualization , or other applications provided data contributors are properly credited with citation.

Open Context currently publishes 29 projects.



Project	Editorial Status	Description	Primary People	Keywords
Mikt'sqaq Angayuk Finds	★★★★★	Finds catalog from Mikt'sqaq Angayuk, an historic Alutiiq settlement of the early 19th century, Alaska	Amy V. Margaris, Fanny Ballantine-Himberg, Mark Rusk, Patrick Saltonstall	Alaska, Alutiiq, Kodiak, Russian colonialism, trade, subsistence
Asian Stoneware Jars	★★★★★	Element composition of Asian Stoneware Jars from the 9th - 19th centuries CE	Peter Grave	
Zooarchaeology of Öküzini Cave	★★★★★	Animal exploitation patterns in SW Anatolia during the Epipaleolithic from assemblages excavated from a finely-stratified cave	Levent Atici	
Zooarchaeology of Karain Cave B	★★★★★	Changes in hunter-gatherer lifestyles that may have led to sedentary agricultural economies in SW Anatolia	Levent Atici	
West Stow West Zooarchaeology	★★★★★	West Stow, Suffolk County, UK Rescue excavations conducted at the site in advance of the construction of a new Visitor Centre	Pamela Crabtree	

- 38 projects currently published (with varying degrees of comprehensiveness)
- 38 different schemas and many different vocabularies (few “standards” in archaeology)



Project: Asian Stoneware Jars

Element composition of Asian Stoneware Jars from the
9th - 19th centuries CE

Number of Views: 363

Project / Collection Overview

Introduction

Asian production and trade in plain and decorated porcelain tablewares become increasingly prominent in the Asian and later international maritime economy from as early as the 9th century CE. One of the less well understood aspects of this trade was the production of large stoneware jars. This project seeks to elementally characterize a wide and diverse range of these jars using inductively coupled plasma optical emission spectrometry (ICP-OES) and neutron activation analysis (NAA), and proton-induced X-ray and gamma emission spectrometry (PIXE-PIGE) to better understand likely provenance as well as production dynamics over this period.

Project Editorial Status

●●●○○ Managing editor reviewed

Suggested Citation

Peter Grave. "Asian Stoneware Jars: (Overview)" (Released 2013-03-07). Peter Grave (Ed.) Open Context.

<<http://opencontext.org/projects/4B16F48E-6F5D-41E0-F568-FCE64BE6D3FA>>

DOI:[10.6078/M7057CVH](https://doi.org/10.6078/M7057CVH)

location data should account for these inaccuracies.

Related References

Grave, Peter, and Maccheroni, Michael

2009

Characterizing Asian Stoneware Jar Production at the Transition to the Early Modern Period, 1550-1650. *Scientific research on historic Asian ceramics: proceedings of the Fourth Forbes Symposium at the Freer Gallery of Art*, edited by Blythe Ellen McCarthy, pp. 186-204. London, Archetype Publications in association with the Freer Gallery of Art, Smithsonian Institution.
[WorldCat] [Open Access]

Project Editorial Status

●●●○○ Managing editor reviewed

Suggested Citation

Peter Grave. "Asian Stoneware Jars: (Overview)" (Released 2013-03-07). Peter Grave (Ed.) Open Context.
<<http://opencontext.org/projects/4B16F48E-6F5D-41E0-F568-FCE64BE6D3FA>>
DOI:[10.6078/M7057CVH](https://doi.org/10.6078/M7057CVH)

Browse this Project



Philippines

402 items contained in this context.
Dating between: 960 to 1600



Northern
Mariana
Islands

158 items contained in this context.
Dating between: 1638 to 1638



Malaysia

111 items contained in this context.
Dating between: 1370 to 1830



South
Africa

66 items contained in this context.
Dating between: 1630 to 1750



Mauritius

62 items contained in this context.
Dating between: 1609 to 1629



Australia

61 items contained in this context.
Dating between: 1629 to 1727



Indian
Ocean

33 items contained in this context.
Dating between: 1615 to 1615



Project: Archaeology of Mesoamerican Animals

Datasets and media with 'The Archaeology of Mesoamerican Animals' (Lockwood Press)

Number of Views: 50

Project / Collection Overview

Introduction

This represents a forthcoming publication of datasets and other media that will supplement some chapters of *The Archaeology of Mesoamerican Animals*, an edited volume to be published with [Lockwood Press](#).

Book Reference

Götz, Christopher M., and Kitty F. Emery (Editors)

In press

The Archaeology of Mesoamerican Animals (La arqueología de los animales de Mesoamérica), Atlanta, GA, Lockwood Press.
[\[Abstract\]](#)

Book Abstract (from [Lockwood's Website](#))

Recognition of the role of animals in ancient diet, economy, politics, and ritual is vital to understanding ancient cultures fully, while following the clues available from animal remains in reconstructing environments is vital to understanding the ancient relationship between humans and the world around them. In response to the growing interest in the field of zooarchaeology, this volume presents current research from across the many cultures and regions of Mesoamerica, dealing specifically with the most current issues in zooarchaeological literature. Geographically, the essays collected here index the different aspects of animal use by the indigenous populations of the entire area between the northern borders of Mexico and the southern borders of lower Central America. This includes such diverse cultures as the Olmec, Maya, Zapotec, Mixtec, and Central American Indians. The time frame of the volume extends from the Preclassic to recent times. The book's chapters, written by experts in the field of Mesoamerican zooarchaeology, provide important general background on the domestic and ritual use of animals in early and classic Mesoamerica and Central America, but deal also with special aspects of human-animal relationships such as early domestication and symbolism of animals, and important yet otherwise poorly represented aspects of taphonomy and zooarchaeological methodology.

Forthcoming Digital Content

- **Chapter 1** Christopher M. Götz, *Digital Companion to 'Introduction'*. DOI: 10.6078/M71Z429Q
- **Chapter 2** Elizabeth S. Wing, *Digital Companion to 'Dog Remains from the Marismas Nacionales'*. DOI:10.6078/M7BG2KWR
- **Chapter 5** Tanya M. Peres, Amber M. VanDerwarker, and Christopher A. Pool, *Digital Companion to 'The Zooarchaeology of Olmec and epi-Olmec Foodways along Mexico's Gulf Coast'*. DOI:10.6078/M76Q1V5F
- **Chapter 8** Christopher M. Götz, and Travis W. Stanton, *Digital Companion to 'The Use of Animals by the Prehispanic Maya of the northern Lowlands'*. DOI:10.6078/M77H1GG5
- **Chapter 9** Marilyn A. Masson and Carlos Peraza Lope, *Digital Companion to 'Animal Consumption at the Monumental Center of Mayapán'*. DOI:10.6078/M76Q1V5F

Project Editorial Status

Forthcoming Placeholder

Suggested Citation

"Archaeology of Mesoamerican Animals: (Overview)" (Released 2013-06-05). Open Context. <<http://opencontext.org/projects/21A79037-01EA-4CBB-7048-6AA054FB4A0D>> DOI:10.6078/M7KW5CX5

Browse this Project

Project dataset is forthcoming, and not yet available to browse or use.

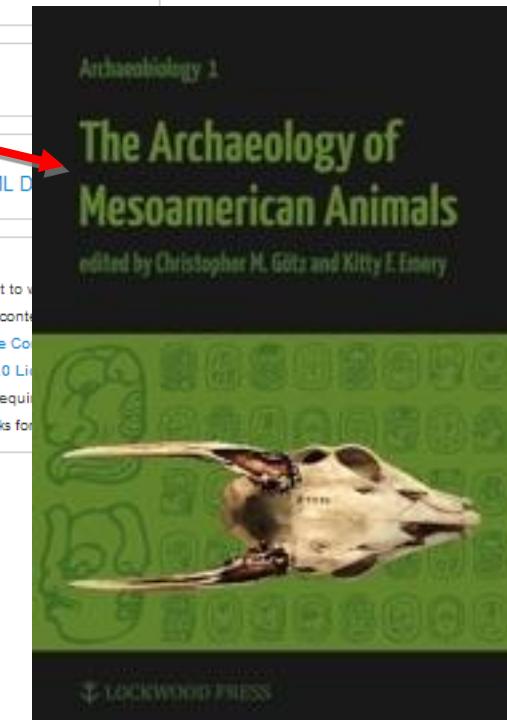
Keywords for this Project

Linked Media (0 files)

[Version-control \(Github, XML D](#)

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Item: PC 20030129

Class: Objects

Context (click to view): [Italy / Poggio Civitate / Tesoro / Tesoro32 / Tr-ID 509](#)

Descriptive Properties (9)

Variable	Value
Fabric Category	Bronze
Object Type	Costume, Accessories::Chain / Links
Fragment Noted	false
Object Type (notes)	Bronze Link Bracelet
Size	Max. Pres. Diameter of Bracelet 0.075 m, Max. Pres. Diameter of Link 0.005 m
Condition	Bracelet is essentially intact with four associated detached portions of links. The surfaces of the links and clasps are distorted in color and wear due to corrosion and oxidation.
Description	A nearly intact bronze bracelet preserves 56 circular links, each composed of thin bronze wire coiled three times. The bracelet also preserves three longer "clasps" each composed of a length of wire bent in a lateral loop at one end, brought together and straightened, then curved back around vertically in a smaller double loop.
Fabric Description	Bronze
Munsell	Mottled - GLEY 5G 5/2 grayish green, GLEY 5G 7/2 pale green

Item Notes

The Poggio Civitate Excavation Project website originally included this object at this address:

<http://poggiocivitate.classics.umass.edu/catalog/viewartifactcatalog.asp?fid=PC2003012900>

Linked Persons / Organizations (1)

[Anthony Tuck, Director](#)

Project: [Murlo](#)

Number of Views: 177

Project Editorial Status

Managing editor reviewed

Suggested Citation

Anthony Tuck. "Murlo: PC 20030129 (Objects)" (Released 2012-12-29). Anthony Tuck (Ed.), Open Context. <<http://opencontext.org/subjects/3B136F69-8A97-47F5-226A-070D24A6BB0B>>

Editorial Description (1)

(700 BCE - 535 BCE)

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.

Linked Data:

CIDOC-CRM-Consists of :: British Museum Thesaurus- bronze

CIDOC-CRM-Has type :: British Museum Thesaurus- chain

Linked Media (16)



**Item: F-7-2004-07-22****Class: Trench**Context (click to view): [Turkey / Kenan Tepe / Area F / Trench 7](#) (linked item)**Document Contents**

Area:F Trench:7,

July 22, 2004

Sibel Torpil / Eser Karaca

Today it is the last day of the season. Because of this reason we tried to hurry. Our first aim was to take out the mud-brick wall L7121 . We wanted to be sure on taken of the mud-brick wall L7121 was sitting on. We have taken of the mud-brick wall with trowels and we have observed that the wall was sitting on an ashy layer L7132. Besides these I have removed the oven L7124. Little amount of potsherds came out of it. The construction material of the oven seems to be highly burned. During removing and after sweeping the L7124 I was able to observe that the whole oven was located on an ashy layer . But this ashy layer is not the same as the one in L7132. This different ashy layer makes us think that there is no connection in between the oven L7124 and the so-called Late Cholcolithic house.

In addition to these I have opened two locia numbers. These two new locia members. These two new locia numbers belong to two pits which are sitting on L7126. But these two pits are to be investigated in the season of 2005.

All in all we have cleared and swept the entire trench, then I have taken the last photos of the trench, and by taking 42 elevations of the trench use have closed the trench for this season.

Document Properties (2)

Variable	Value
Date	2004-07-22
Year	2004

Item Notes

The purpose of the daily journal was to record the activities taking place in a trench each day. This included which loci were excavated, how and why loci were excavated and the ongoing impressions of the relationships among loci. It should be noted that journals record the actions, impressions and ideas of trench supervisors during the excavations. They are not, therefore, the final interpretations or syntheses of the emerging data.

Project: Kenan Tepe**Number of Views: 0****Project Review Status**

Editorial board reviewed

Suggested Citation

Sibel Torpil, Eser Karaca. "Kenan Tepe: F-7-2004-07-22" (Released 2012-02-28). Bradley Parker, Peter Cobb (Eds.) Open Context. <<http://opencontext.org/media/14E826A9-A779-4094-AF8F-A9F8706983E9>>

Linked Media (2)

2004-07-22



2004-07-22

[ArchaeoML \(XML\) Version](#)[Version-control \(Github, XML Data\)](#)**Copyright Licensing**

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Commons Attribution3 License Attribution
Required: Citation, and hyperlinks for
online uses.



Item: 20070199_2009_003.jpg

Class: Objects

Context (click to view):

[Italy / Poggio Civitate / Tesoro / Tesoro47 / Tr-ID 586 / PC 20070199](#) (linked item)

Media Preview

Project: **Murlo**

Number of Views: 3

Project Review Status

Managing editor reviewed

Suggested Citation

Anthony Tuck. "Murlo: 20070199_2009_003.jpg" (Released 2012-12-29). Anthony Tuck (Ed.) Open Context. <<http://opencontext.org/media/13AED501-A908-4FCF-53F1-470522DA4B19>>.

Linked Media (0)

[ArchaeoML \(XML\) Version](#)[Version-control \(Github, XML Data\)](#)

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Attribution Required: Citation, and hyperlinks for online uses.

Media Properties (6)

Variable	Value
Title	Bone Inlay in the Shape of a Human Head
Primary photo	0
Photo type	1
Photo ID	24788
Album ID	0
Description	This bone inlay preserves the full form of a human face and portions of the neck. The features of the face are as follows: a wide forehead; almond shaped protruding eyes with incised orbitals; a triangular pointed nose; prominent cheekbones; clearly defined straight mouth; and a narrow and pointed chin. The neck is flat and rectangular in cross-section. The top of the head is flat and set at a slightly angled plane. The back

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  <arch:string> PC 20030129 </arch:string>
</arch:name>

► <oc:item_class>
▼ <arch:observations>
  ▼ <arch:observation obsNumber="1">
    ► <oc:obs_metadata>
      ▼ <arch:properties>
        <arch:property>
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          <oc:show_val> Bronze </oc:show_val>
        ► <oc:linkedData>
        </arch:property>
        <arch:property>
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          <arch:valueID> 4161B46F-811D-4FD4-EB8C-0669D9020097 </arch:valueID>
          <oc:propid href="http://opencontext.org/properties/145500AA-77FF-4C1D-CF86-A075DCAAAB43B"> 145500AA-77FF-4C1D-CF86-A075DCAAAB43B </oc:propid>
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          <oc:show_val> Costume, Accessories::Chain / Links </oc:show_val>
        ► <oc:linkedData>
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      ▶ <arch:property>
      </arch:properties>

      <arch:links>
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      </arch:links>
    </arch:observation>
  </arch:observations>
</arch:spatialUnit>
```

Global Schema

- “ArchaeoML”
(Archaeological
Markup Language)
- Developed at
University of
Chicago
- **Some common (but
abstract) semantics**

Attribute – Value Pairs ("Properties")

```
<arch:spatialUnit xmlns:arch="http://ochre.lib.uchicago.edu/schema/SpatialUnit/SpatialUnit.xsd" xmlns:oc="http://opencontext.org/schema/space_schema_v1.xsd" xmlns:dc="

<arch:name>
  <arch:string> PC 20030129 </arch:string>
</arch:name>

► <oc:item_class>
▼ <arch:observations>
  ▼ <arch:observation obsNumber="1">
    ► <oc:obs_metadata>
      ▼ <arch:properties>
        <arch:property>
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          <oc:propid href="http://opencontext.org/properties/251EBD03-7267-4C14-638A-CB99AEDBCEB3"> 251EBD03-7267-4C14-638A-CB99AEDBCEB3 </oc:propid>
          <oc:var_label type="nominal"> Fabric Category </oc:var_label>
          <oc:show_val> Bronze </oc:show_val>
        ► <oc:linkedData>
        </arch:property>
      <arch:property>
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        <arch:valueID> 4161B46F-811D-4FD4-EB8C-0669D9020097 </arch:valueID>
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```

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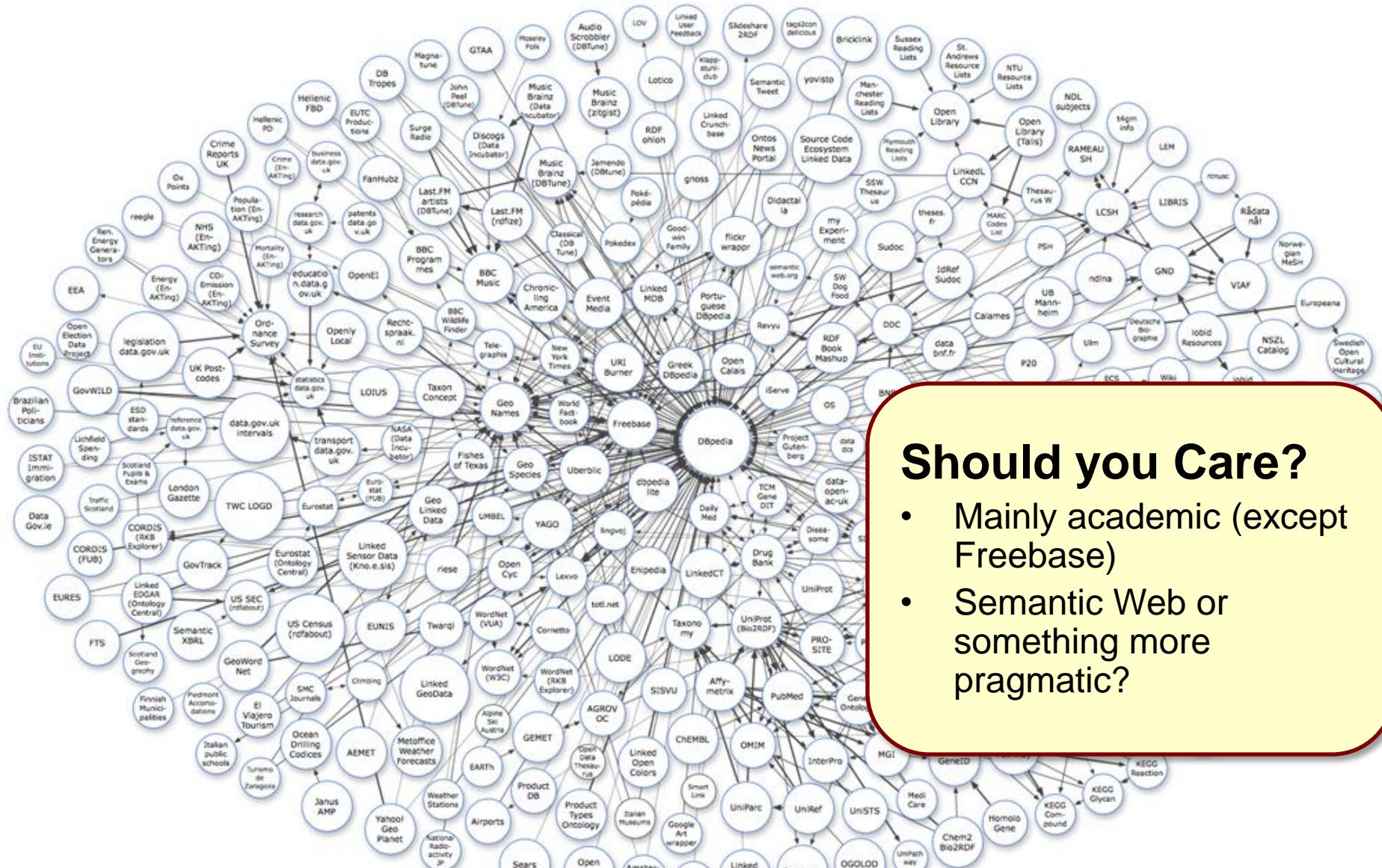
<arch:name>
  <arch:string> PC 20030129 </arch:string>
</arch:name>

► <oc:item_class>
▼ <arch:observations>
  ▼ <arch:observation obsNumber="1">
    ► <oc:obs_metadata>
    ▼ <arch:properties>
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        <arch:valueID> 4D0D2D76-FD06-48EC-5140-91AD1E174B9A </arch:valueID>
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        <oc:var_label type="nominal"> Fabric Category </oc:var_label>
        <oc:show_val> Bronze </oc:show_val>
      ► <oc:linkedData> 
      </arch:property>
      <arch:property>
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        <oc:propid href="http://opencontext.org/properties/145500AA-77FF-4C1D-CF86-A075DCAAB43B"> 145500AA-77FF-4C1D-CF86-A075DCAAB43B </oc:propid>
        <oc:var_label type="nominal"> Object Type </oc:var_label>
        <oc:show_val> Costume::Accessories::Chain / Links </oc:show_val>
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    ► <arch:property>
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    ► <arch:property>
    ► <arch:property>
    ► <arch:property>
    </arch:properties>

    <arch:links>
      <arch:docID type="resource" info="link"> 86E1590F-C56B-4744-C0DB-407E8EECA449 </arch:docID>
      <arch:docID type="resource" info="link"> 279F9BAC-587A-4D16-CCF9-DA340A722773 </arch:docID>
    </arch:links>
  </arch:observation>
</arch:observations>
```

Sometimes add additional semantics (referencing concepts / entities via URLs)

Web of Data (2011)



Should you Care?

- Mainly academic (except Freebase)
- Semantic Web or something more pragmatic?



Item: Bone J8c22-31

Class: Animal Bone

Context (click to view):

[Turkey](#) / [Öküzini Cave](#) / [VII](#) / [Square J8c](#)
Descriptive Properties (23)

Variable	Value
Archaeological Horizon	22
Osteo Id	Metatarsus III + IV
Taxonomic Id	Ovis orientalis
Articulation	Separate
Symmetry	Right
Sex	Nonidentified
Pathology	No pathology

Linked Data:

Open Context Zooarchaeology Annotations-Has anatomical identification :: UBERON (Uber Anatomy Ontology)- fused metatarsal bones 3 and 4

Biological Taxonomy Vocabulary-Has Biological Taxonomy :: Encyclopedia of Life- [Ovis orientalis](#)

Open Context Zooarchaeology Annotations-Has fusion character ::

Open Context Zooarchaeology Annotations- Distal epiphysis unfused

Depth of the medial trochanter condyle (B)	11.7
Greatest depth of the distal end (Dd)	17.5
Greatest breadth of the distal end (Bd)	27.2

Linked Persons / Organizations (1)

[Levent Atıcı, Principle Author / Analyst](#)

Project: Zooarchaeology of Öküzini Cave**Number of Views: 5****Project Editorial Status**

Managing editor reviewed

Suggested Citation

Levent Atıcı. "Zooarchaeology of Öküzini Cave: Bone J8c22-31 (Animal Bone)" (Released 2013-02-27). Levent Atıcı (Ed.) Open Context. <<http://opencontext.org/subjects/0CF37A48-3C8D-45CA-C7D8-58C2B9F03889>>

Editorial Description (1)

(18K BCE - 11K BCE)

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.

Linked Data:

Open Context Zooarchaeology Annotations-Has anatomical identification :: UBERON (Uber Anatomy Ontology)- fused metatarsal bones 3 and 4

Biological Taxonomy Vocabulary-Has Biological Taxonomy :: Encyclopedia of Life- [Ovis orientalis](#)

Open Context Zooarchaeology Annotations-Has fusion character :: Open Context Zooarchaeology Annotations- Distal epiphysis unfused

Linked Media (0)

[ArchaeoML \(XML\) Version](#)

[Version-control \(Github, XML Data\)](#)

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Item: Bone J8c22-31

Class: Animal Bone

Context (click to view):

Turkey / Öküzini Cave / VII / Square J8c

Descriptive Properties (23)

Variable	Value
Archaeological Horizon	22
Osteo Id	Metatarsus III + IV
Taxonomic Id	Ovis orientalis
Articulation	Separate
Symmetry	Right
Sex	Nonidentified
Pathology	No pathology

Linked Data:

Open Context Zooarchaeology Annotations-Has anatomical identification :: UBERON (Uber Anatomy Ontology)- fused metatarsal bones 3 and 4

Biological Taxonomy Vocabulary-Has Biological Taxonomy :: Encyclopedia of Life- Ovis orientalis

Open Context Zooarchaeology Annotations-Has fusion character ::

Open Context Zooarchaeology Annotations- Distal epiphysis unfused

Depth of the medial trochanter condyle (B)	11.7
--	------

Greatest depth of the distal end (Dd)	17.5
---------------------------------------	------

Greatest breadth of the distal end (Bd)	27.2
---	------

Project: Zooarchaeology of Öküzini Cave

Number of Views: 5

Project Editorial Status

★★★★ Managing editor reviewed

Suggested Citation

Levent Atıcı. "Zooarchaeology of Öküzini Cave: Bone J8c22-31 (Animal Bone)" (Released 2013-02-27). Levent Atıcı (Ed.) Open Context. <http://opencontext.org/subjects/0CF37A48-3C8D-45CA-C7D8-58C2B9F03889>

Editorial Description (1)

(18K BCE - 11K BCE)

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Linked Data:

Open Context Zooarchaeology Annotations-Has anatomical identification :: UBERON (Uber Anatomy Ontology)- fused metatarsal bones 3 and 4

Biological Taxonomy Vocabulary-Has Biological Taxonomy :: Encyclopedia of Life- Ovis orientalis

Open Context Zooarchaeology Annotations-Has fusion character :: Open Context Zooarchaeology Annotations- Distal epiphysis unfused

Linked Media (0)

ArchaeoML (XML) Version

Version-control (Github, XML Data)

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Linked Persons / Organizations (1)

Levent Atıcı, Principle Author / Analyst

[Home](#) | [Introduction](#) | [Ontobeepp](#) | [SPARQL Query](#) | [Tutorial](#) | [FAQs](#) | [References](#) | [Links](#) | [Contact](#) | [Acknowledge](#)

[Uber anatomy ontology](#)

Keywords: [Search terms](#)

Class: fused metacarpal bones 3 and 4

- Term IRI: http://purl.obolibrary.org/obo/UBERON_0013587
- definition: An element formed from the fusion of metacarpal 3 and metacarpal 4. [database_cross_reference: <http://orcid.org/0000-0001-7920-5321>]

Annotations

- has_oberon_namespace: uberon
- has_exact_synonym: fused metacarpal 3/4
- has_related_synonym: metacarpal 3+4
- id: UBERON:0013587
- comment: In many artiodactyls, the 3rd & 4th metapodials are fused, creating a main metapodial.

Equivalents

- [metacarpal bone](#) and ([has_fused_element](#) some [metacarpal bone of digit 3](#)) and ([has_fused_element](#) some [metacarpal bone of digit 4](#))

Class Hierarchy

Thing

- + [anatomical entity](#)
- + [material anatomical entity](#)
 - + [anatomical structure](#)
 - + [organ](#)
 - + [skeletal element](#)
 - + [bone element](#)
 - + [bone of appendage girdle complex](#)
 - + [bone of free limb or fin](#)
 - + [limb bone](#)
 - + [autopod bone](#)
 - + [digitopodium bone](#)
 - + [metapodium bone](#)
 - + [fused metapodial bones 3 and 4](#)
 - [fused metatarsal bones 3 and 4](#)
 - [fused metacarpal bones 3 and 4](#)

Superclasses & Asserted Axioms

- [fused metapodial bones 3 and 4](#)

obo:UBERON_0013587, fus x

www.ontobee.org/browser/rdf.php?o=UBERON&iri=http://purl.obolibrary.org/obo/UB

Ontobee

Home | Introduction | Ontobeepp | SPARQL Query | Tutorial | FAQs | References | Links | Contact | Acknowledge

Uber anatomy ontology

Keywords: Search terms

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- comment: In many artiodactyls, the 3rd & 4th metapodials are fused, creating a main metapodial.

Equivalents

- [metacarpal bone](#) and [\(has_fused_element some metapodium\)](#)

Class Hierarchy

```
graph TD; Thing --> anatomical_entity[anatomical entity]; anatomical_entity --> material_anatomical_entity[material anatomical entity]; material_anatomical_entity --> anatomical_structure[anatomical structure]; anatomical_structure --> organ[organ]; organ --> skeletal_element[skeletal element]; skeletal_element --> bone_element[bone element]; bone_element --> bone_of_appendage_girdle_complex[bone of appendage girdle complex]; bone_of_appendage_girdle_complex --> bone_of_free_limb_or_fin[bone of free limb or fin]; bone_of_free_limb_or_fin --> limb_bone[limb bone]; limb_bone --> autopod_bone[autopod bone]; autopod_bone --> digitopodium_bone[digitopodium bone]; digitopodium_bone --> metapodium_bone[metapodium bone]; metapodium_bone --> fused_meta[fused meta]; fused_meta --> fused_me[fused me]; fused_me --> fused_m[fused m]
```

Superclasses & Asserted Axioms

- [fused metapodial bones 3 and 4](#)

Why Reference Ontologies?

1. Expresses relevant expert knowledge, tremendous effort. Why ignore or duplicate this effort?
2. Inference possibilities: Anatomic entities related to embryology, genetic networks. BUT! Big data quality / practicality issues.



Item: Bone J8c22-31

Class: Animal Bone

Context (click to view):

[Turkey](#) / [Öküzini Cave](#) / [VII](#) / [Square J8c](#)
Descriptive Properties (23)

Variable	Value
Archaeological Horizon	22
Osteo Id	Metatarsus III + IV
Taxonomic Id	Ovis orientalis
Articulation	Separate
Symmetry	Right
Sex	Nonidentified
Pathology	No pathology

Linked Data:

Open Context Zooarchaeology Annotations-Has anatomical identification :: UBERON (Uber Anatomy Ontology)- fused metatarsal bones 3 and 4

Biological Taxonomy Vocabulary-Has Biological Taxonomy :: Encyclopedia of Life- [Ovis orientalis](#)

Open Context Zooarchaeology Annotations-Has fusion character ::

Open Context Zooarchaeology Annotations- Distal epiphysis unfused

Depth of the medial trochanter condyle (B)	11.7
Greatest depth of the distal end (Dd)	17.5
Greatest breadth of the distal end (Bd)	27.2

Linked Persons / Organizations (1)

[Levent Atıcı](#), Principle Author / Analyst

Project: Zooarchaeology of Öküzini Cave**Number of Views: 5****Project Editorial Status**

Managing editor reviewed

Suggested Citation

Levent Atıcı. "Zooarchaeology of Öküzini Cave: Bone J8c22-31 (Animal Bone)" (Released 2013-02-27). Levent Atıcı (Ed.) Open Context. <<http://opencontext.org/subjects/0CF37A48-3C8D-45CA-C7D8-58C2B9F03889>>

Editorial Description (1)

(18K BCE - 11K BCE)

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.

Linked Data:

Open Context Zooarchaeology Annotations-Has anatomical identification :: UBERON (Uber Anatomy Ontology)- fused metatarsal bones 3 and 4

Biological Taxonomy Vocabulary-Has Biological Taxonomy :: Encyclopedia of Life- [Ovis orientalis](#)

Open Context Zooarchaeology Annotations-Has fusion character :: Open Context Zooarchaeology Annotations- Distal epiphysis unfused

Linked Media (0)

[ArchaeoML \(XML\) Version](#)

[Version-control \(Github, XML Data\)](#)

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Urial - *Ovis orientalis* - Ovi x

eol.org/pages/11021638/overview

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Join EOL now
Already a member? Sign In

Ovis orientalis

Urial [learn more about names for this taxon](#)

Tweet 0 Like 2

Overview Detail 3 Media 0 Maps Names Community Resources Literature Updates

 see all media

IUCN threat status: [Vulnerable \(VU\)](#)

Brief Summary [read full entry](#)

Biology

Mouflon tend to feed early in the morning and in the evening, resting during the day under an overhanging bush or rock, where they are well hidden. Mouflon are gregarious and form non-territorial herds grazing on grasses,

Found in 2 classifications [see all](#)

Species recognized by NCBI Taxonomy

Cellular organisms

Eukaryota

Unikonta

Metazoa

Eumetazoa

Bilateria

Deuterostomia

Chordata

Gnathostomata

Vertebrata

Gnathostomata

Teleostomi

Euteleostomi

Beryciformi

Tetrapoda

Amniota

Mammalia

Theria

Eutheria

Lauresiatheria

Cetartiodactyla

Ruminantia

Pecora

Bovidae

Caprinae

Ovis

Ovis orientalis

Ovis orientalis

Ovis orientalis

Ovis orientalis

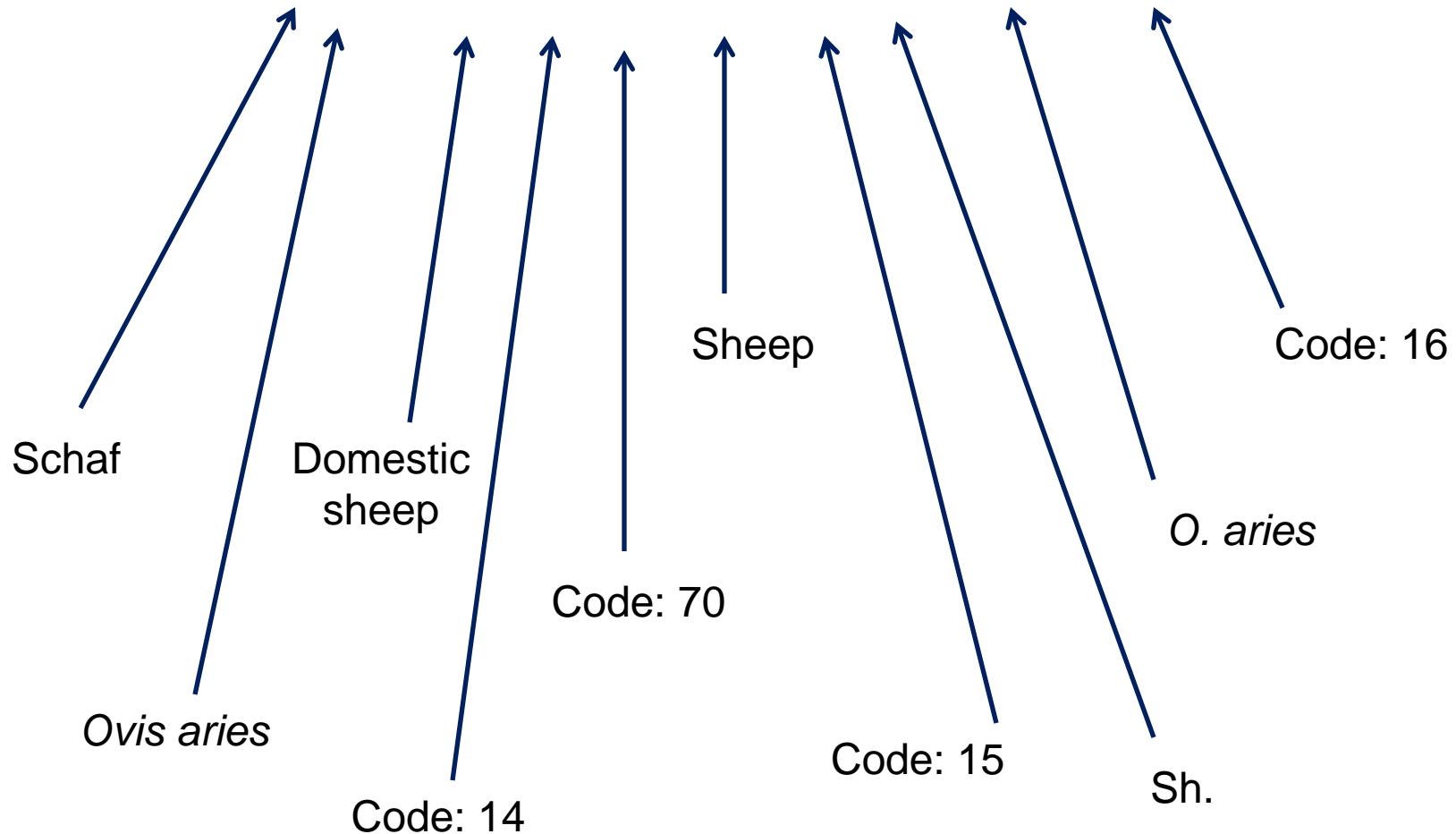
Ovis ammon

Ovis canadensis

Ovis canadensis

“Ovis aries”

<http://eol.org/pages/311906/>



Browse and Filter

Click on one of the links below to further limit your view of analytic data in Open Context.

Or, type a search term in the box

Sort facets alphabetically: A,B,C ↓

- EOL linked Biological Taxa

Select Multiple

 - Bos taurus Linnaeus, 1758 (*Encyclopedia of Life*) 11835
 - Bos primigenius (*Encyclopedia of Life*) 290

- Descriptive Properties

Select Multiple

- Element 16329
- Taxon 13763
- Symmetry 10175
- Certainty 7733
- Weathering 6010
- Recovery 5449
- Validity 5449
- Side 5243
- Species 5005
- Class 4614
- Fragment Size 3628
- Element Name 3601

[More...](#)

- Context

Select Multiple

- Çatalhöyük 6438
- İlipinar 3601
- Hazor 2056
- Domuztepe 2014

Open Context currently has **21252** items, filtered by the following criteria:

- | | | |
|-----------------------|--|----------------------------------|
| (1) Contained in: | Turkey OR Iran OR Israel OR Jordan | <input type="button" value="X"/> |
| (2) Biological Taxa: | Bos (Cattle, oxen) (<i>from Encyclopedia of Life</i>); includes more specific sub-taxa | <input type="button" value="X"/> |
| (3) Geo-spatial Tile: | 1 (Zoom out a tile level) | <input type="button" value="X"/> |

Last Updated: September 3, 2013, 1:44 am

[View a map summary](#)

Page 1 of 2126, sorted by Interest score (desc)

Sort By: Context Project name Item label Updated time Publication time



```
<arch:spatialUnit xmlns:arch="http://ochre.lib.uchicago.edu/schema/SpatialUnit/SpatialUnit.xsd" xmlns:oc="http://opencontext.org/schema/space_schema_v1.xsd" xmlns:dc="

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**Linking relations to other related XML documents
(Describing a “graph”, a data model Erik will discuss more later)**



```
<arch:spatialUnit xmlns:arch="http://ochre.lib.uchicago.edu/schema/SpatialUnit/SpatialUnit.xsd" xmlns:oc="http://opencontext.org/schema/space_schema_v1.xsd" xmlns:dc="

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          <oc:show_val> Bronze </oc:show_val>
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      </arch:links>
    </arch:observation>
  </arch:observations>
</arch:spatialUnit>
```

Where do we get the XML?

- Schema mapping (source data tables) mapped into MySQL relational database (abstract, general schema)
- MySQL + PHP generates XML documents
- Since 2007, since then new tools: Open Refine, graph data stores, NoSQL databases, etc.



Project: Asian Stoneware Jars

Element composition of Asian Stoneware Jars from the
9th - 19th centuries CE

Number of Views: 363

Project / Collection Overview

Introduction

Asian production and trade in plain and decorated porcelain tablewares become increasingly prominent in the Asian and later international maritime economy from as early as the 9th century CE. One of the less well understood aspects of this trade was the production of large stoneware jars. This project seeks to elementally characterize a wide and diverse range of these jars using inductively coupled plasma optical emission spectrometry (ICP-OES) and neutron activation analysis (NAA), and proton-induced X-ray and gamma emission spectrometry (PIXE-PIGE) to better understand likely provenance as well as production dynamics over this period.

Over twenty Asian and European wreck assemblages were sampled with the majority ranging in date from the fourteenth to the seventeenth century. The sample also includes a substantial sample from a National Museum of the Philippines and the University of Michigan collections of stoneware jars from Philippine burials as well as other terrestrial collections in the Southeast Asian region. The establishment of clear compositional groups provides a basis for assigning provenance and the postulation of seventeen discrete production zones ranging from southern China to Burma, but for which precise production locations remain largely unknown or unverified. In combination with typological information and chronological organization, these groups provide a valuable proxy for assessing changes in regional production strategies through the transition to the modern era.

ICP-OES, cross validated with NAA and PIXE-PIGE was used to generate a robust elemental dataset for this assemblage. This comprehensive database is designed to enable comparison and incorporation with ongoing analyses of archaeological stoneware samples from new archaeological excavations. The scale of this work is currently unsurpassed but nonetheless it must be considered as a preliminary attempt to develop a new perspective on the social, economic, and political dynamics of this time and region.

Notes about Context and Geo-locations

Individual vessels samples originally came from either terrestrial or ship-wreck sources. This project provides only general contextual information. For more specific information about the archaeological context of the objects sampled, please refer to documentation maintained by relevant museums.

Because of site security risks and other factors, all location information presented in this project is approximate. Indicated locations may be over 100 km. from their true positions. Analytic uses of these location data should account for these inaccuracies.

Related References

Grave, Peter, and Maccheroni, Michael

2009

Characterizing Asian Stoneware Jar Production at the Transition to the Early Modern Period, 1550-1650. *Scientific research on historic Asian ceramics: proceedings of the Fourth Forbes Symposium at the Freer Gallery of Art*, edited by Blythe Ellen McCarthy, pp. 186-204. London, Archetype Publications in association with the Freer Gallery of Art, Smithsonian Institution.
[\[WorldCat\]](#) [\[Open Access\]](#)

Project Editorial Status

●●●● Managing editor reviewed

Suggested Citation

Peter Grave. "Asian Stoneware Jars: (Overview)" (Released 2013-03-07). Peter Grave (Ed.) Open Context.
<http://opencontext.org/projects/4B16F48E-6F5D-41E0-F568-FCE64BE6D3FA>
 DOI:10.6078/M7057CVH

Browse this Project

XML use:

- Some nodes have mixed content XHTML (+ RDFa)
- Other nodes easier for databases

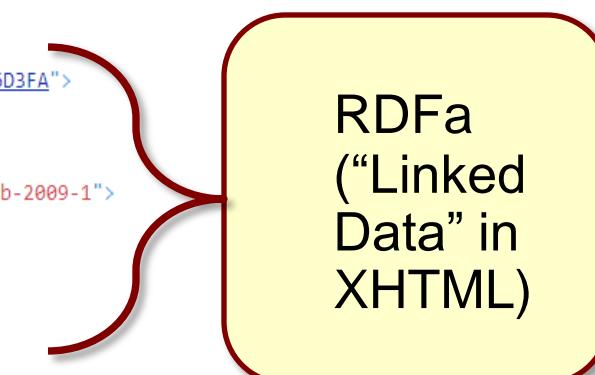
	Mauritius	62 items contained in this context. Dating between: 1609 to 1629
	Australia	61 items contained in this context. Dating between: 1629 to 1727
	Indian Ocean	33 items contained in this context. Dating between: 1615 to 1615

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> <arch:note type="short_des">
<arch:note type="long_des">
  <arch:string type="xhtml">
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      <div>
        <h4> Introduction </h4>
        <p>
          Asian production and trade in plain and decorated porcelain tablewares become increasingly prominent in the Asian and later international maritime economy from as early as the 9th century CE. One of the less well understood aspects of this trade was the production of large stoneware jars. This project seeks to elementally characterize a wide and diverse range of these jars using inductively coupled plasma optical emission spectrometry (ICP-OES) and neutron activation analysis (NAA), and proton-induced X-ray and γ-ray emission spectrometry (PIXE-PIGE) to better understand likely provenance as well as production dynamics over this period.
        </p>
      > <p>
      > <p>
        <h5> Notes about Context and Geo-locations </h5>
      > <p>
        <p>
          Because of site security risks and other factors, all location information presented in this project is approximate. Indicated locations may be over 100 km. from their true positions. Analytic uses of these location data should account for these inaccuracies.
        </p>
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        </p>
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<arch:string>
Node with mixed content (XHTML)

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          </p>  
        > <p>  
        > <p>  
          <h5> Notes about Context and Geo-locations </h5>  
        > <p>  
          <p>  
            Because of site security risks and other factors, all location information presented in this project is approximate. Indicated locations may be over 100 km. from their true positions. Analytic uses of these location data should account for these inaccuracies.  
          </p>  
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Dublin Core metadata elements
("dc" namespace)

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  <arch:string> PC 20030129 </arch:string>
</arch:name>

▶ <oc:item_class>
▼ <arch:observations>
  ▶ <arch:observation obsNumber="1">
    ▶ <oc:obs_metadata>
      ▶ <arch:properties>
        <arch:property>
          <arch:variableID> A70236CA-1599-42F5-4A12-ACEC8C423850 </arch:variableID>
          <arch:valueID> 4D0D2D76-FD06-48EC-5140-91AD1E174B9A </arch:valueID>
          <oc:propid href="http://opencontext.org/properties/251EBD03-7267-4C14-638A-CB99AEDBCEB3"> ? 
          <oc:var_label type="nominal"> Fabric Category </oc:var_label>
          <oc:show_val> Bronze </oc:show_val>
        ▶ <oc:linkedData>
        </arch:property>
        <arch:property>
          <arch:variableID> 7DB79382-7432-42A4-FBC5-EF760691905A </arch:variableID>
          <arch:valueID> 4161B46F-811D-4FD4-EB8C-0669D9020097 </arch:valueID>
          <oc:propid href="http://opencontext.org/properties/145500AA-77FF-4C1D-CF86-A075DCAA83"> ? 
          <oc:var_label type="nominal"> Object Type </oc:var_label>
          <oc:show_val> Costume, Accessories::Chain / Links </oc:show_val>
        ▶ <oc:linkedData>
        </arch:property>
      ▶ <arch:property>
        </arch:properties>
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```

Global Schema

- ArchaeoML XSDs disappeared in 2010 😞
- Nobody else uses it (potential as interchange format not realized)
- Not a huge amount of XML expertise in domain
- More widespread interest in RDF (in academia)



Table: “Çatalhöyük Main Zooarchaeological Dataset”

The data in this table comes from one project or collection. Some data relating to the records in this table may depend upon complex structures that cannot be easily represented in a table format. If you need data fully expressing such complex structures, download the XML representations of these data. To learn how to do this, please read the [web-services documentation](#).

Download Table: [CSV format](#)

- Download File Formats**
- [Comma Separated Value \(CSV\)](#)
(78.6M)
 - [ZIP-compressed CSV file](#)
(5.8M)
 - [GZIP-compressed CSV file](#)
(5.8M)
 - [Javascript Object Notation \(JSON\) file](#)
(188.7M)
 - [Javascript Object Notation \(JSON\) file \[Sample, limited records\]](#)
(807.9K)

Table Name	Çatalhöyük Main Zooarchaeological Dataset
Number of Records	126116
Table Description	<p>This is the main data table for the "Çatalhöyük Zooarchaeology" project. To promote interoperability and facilitate reuse, Open Context editors annotated these data with Encyclopedia of Life (EOL) and UBERON identifiers. In addition, Open Context editors related relevant data to the "Open Context Zooarchaeology" ontology / controlled vocabulary. Support for this data publication came from the Encyclopedia of Life Computational Data Challenge.</p> <p>These data describe specimen from all of the Çatalhöyük excavation areas, except for Area TP, which is available in another table.</p>
Principal Analyst(s) / Observers	Nerissa Russell, Katheryn Twiss, Sheelagh Frame, Lisa Yeomans, Louise Martin, Claire Christensen, David Orton, Arzu Demirergi, Stephanie Meese, Kamilla Pawlowska, Banu Aydinuloglu, Liz Henton, Adam Watson, Rhian Mayon-White, Ian Cameron, Amanda Erwin, Vesna Dimitrijevic, Rebecca Daly, Nobs Symmons, Serkan Yeni, Denise Carruthers, Chris Hills, Hijlke Buitenhuis, Leola Leblanc, Levent Atici, Dusan Boric, Adrienne Powell
Directing / Supervisory People (Editorial Role)	David Orton, Sheelagh Frame, Louise Martin, Katheryn Twiss, Nerissa Russell
Projects and Collections	Çatalhöyük Zooarchaeology (126116)



Table: “Çatalhöyük Main Zooarchaeological Dataset”

The data in this table comes from one project or collection. Some data relating to the records in this table may depend upon complex structures that cannot be easily represented in a table format. If you need data fully expressing such complex structures, download the XML representations of these data. To learn how to do this, please read the [web-services documentation](#).

Download Table: CSV format

Table Name	Çatalhöyük Main Zooarchaeological Dataset
Number of Records	126116
Table Description	<p>This is the main data table for the "Çatalhöyük Zooarchaeology" project. To promote interoperability, editors annotated these data with Encyclopedia of Life (EOL) and UBERON identifiers. In addition, data conform to the "Open Context Zooarchaeology" ontology / controlled vocabulary. Support for this dataset is provided by the Encyclopedia of Life Computational Data Challenge.</p> <p>These data describe specimen from all of the Çatalhöyük excavation areas, except for Area T1.</p>
Principal Analyst(s) / Observers	Nerissa Russell, Katheryn Twiss, Sheelagh Frame, Lisa Yeomans, Louise Martin, Claire Chrisman, Stephanie Meese, Kamilla Pawlowska, Banu Aydinuloglu, Liz Henton, Adam Watson, Rhian Mayon-white, Ian Cameron, Almudra Erwill, Vesna Dimitrijevic, Rebecca Daly, Nobs Symmons, Serkan Yeni, Denise Carruthers, Chris Hills, Hijlke Buitenhuis, Leola Leblanc, Levent Atici, Dusan Boric, Adrienne Powell
Directing / Supervisory People (Editorial Role)	David Orton, Sheelagh Frame, Louise Martin, Katheryn Twiss, Nerissa Russell
Projects and Collections	Çatalhöyük Zooarchaeology (126116)

Download File Formats

[Comma Separated Value \(CSV\)](#)
(78.6M)

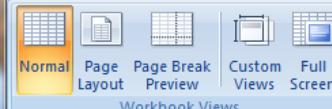
[ZIP-compressed CSV file](#)
(5.8M)

[GZIP-compressed CSV file](#)
(5.8M)

[Javascript Object Notation \(JSON\) file](#)
(188.7M)

[Javascript Object Notation \(JSON\) file \[Sample, limited records\]](#)
(807.9K)

Much more comfort,
familiarity in domain
(despite limitations)



D14

fx

Çatalhöyük Zooarchaeology

	A	B	C	D	E	F	G	H
1	Open Context URI	Item label	Project URI	Project name	Related person(s)	Context (1)	Context (2)	Context (3)
2	http://opencontext.org/subjects/E93B0801-C1F15144.F1		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
3	http://opencontext.org/subjects/1E85F957-C7815144.F11		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
4	http://opencontext.org/subjects/2B536F1D-49415144.F2		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
5	http://opencontext.org/subjects/321A7C3E-C0515144.F3		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
6	http://opencontext.org/subjects/BB3DFD89-EA15144.F4		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
7	http://opencontext.org/subjects/FE9AD352-88E15144.F5		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
8	http://opencontext.org/subjects/E0A49E6C-12415144.F6		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
9	http://opencontext.org/subjects/B81D0A45-08E15144.F7		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
10	http://opencontext.org/subjects/FED5FF1C-0DA15144.F8		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
11	http://opencontext.org/subjects/7865EA14-65215160.F1		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
12	http://opencontext.org/subjects/4F3B9A16-A3E15160.F10		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
13	http://opencontext.org/subjects/E4C88730-56915160.F100		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
14	http://opencontext.org/subjects/3D0CCD9D-0315160.F101		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
15	http://opencontext.org/subjects/9917C5C3-62E15160.F102		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
16	http://opencontext.org/subjects/BB97AF04-07E15160.F103		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
17	http://opencontext.org/subjects/57BBFF8A-1A715160.F104		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
18	http://opencontext.org/subjects/9A4DE123-CA15160.F105		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
19	http://opencontext.org/subjects/25F21C15-F4415160.F106		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
20	http://opencontext.org/subjects/3869D3CE-AF515160.F107		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
21	http://opencontext.org/subjects/761A31FF-93315160.F108		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
22	http://opencontext.org/subjects/08EF979D-FAF15160.F109		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
23	http://opencontext.org/subjects/D37E8EFD-DF515160.F11		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
24	http://opencontext.org/subjects/2E38570B-55515160.F110		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
25	http://opencontext.org/subjects/5E93CFDD-E5715160.F111		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
26	http://opencontext.org/subjects/9DEF875E-36215160.F112		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
27	http://opencontext.org/subjects/3342AB03-A9E15160.F112		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
28	http://opencontext.org/subjects/F2C973D8-87215160.F120		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
29	http://opencontext.org/subjects/208D2BC2-04F15160.F13		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	
30	http://opencontext.org/subjects/6B39054F-47715160.F14		http://opencontext.org/projects/1B42C Çatalhöyük Zooarchaeology	David Orton	Turkey	Çatalhöyük	Mound W	

Microsoft Excel

catalhoyuk-main-1 - Microsoft Excel

Home Insert Page Layout Formulas Data Review View PDF Acrobat

Normal Page Layout Page Break Preview Custom Views Full Screen

Ruler Formula Bar Gridlines Headings Message Bar

Zoom 100% Zoom to Selection New Window Arrange All Freeze Panes Hide View Side by Side Synchronous Scrolling Reset Window Position Save Workspace Switch Windows Macros

Show/Hide

D14 f.x Çatalhöyük Zooarchaeology

A B C D E F G H

1 Open Context URI Item label Project URI Project name

2 http://opencontext.org/subjects/E93B0801-C1F15144.F1 http://opencontext.org/projects/1B426 Çatalhöyük

3 http://opencontext.org/subjects/1E85F957-C7815144.F11 http://opencontext.org/projects/1B426 Çatalhöyük

4 http://opencontext.org/subjects/2B536F1D-49415144.F2 http://opencontext.org/projects/1B426 Çatalhöyük

5 http://opencontext.org/subjects/321A7C3E-C0515144.F3 http://opencontext.org/projects/1B426 Çatalhöyük

6 http://opencontext.org/subjects/BB3DFD89-EA15144.F4 http://opencontext.org/projects/1B426 Çatalhöyük

7 http://opencontext.org/subjects/FE9AD352-88615144.F5 http://opencontext.org/projects/1B426 Çatalhöyük

8 http://opencontext.org/subjects/E0A49E6C-12415144.F6 http://opencontext.org/projects/1B426 Çatalhöyük

9 http://opencontext.org/subjects/B81D0A45-08215144.F7 http://opencontext.org/projects/1B426 Çatalhöyük

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11 http://opencontext.org/subjects/7865EA14-65215160.F1 http://opencontext.org/projects/1B426 Çatalhöyük

12 http://opencontext.org/subjects/4F3B9A16-A3E15160.F10 http://opencontext.org/projects/1B426 Çatalhöyük

13 http://opencontext.org/subjects/E4C88730-56915160.F100 http://opencontext.org/projects/1B426 Çatalhöyük

14 http://opencontext.org/subjects/3D0CCD9D-0315160.F101 http://opencontext.org/projects/1B426 Çatalhöyük

15 http://opencontext.org/subjects/9917C5C3-62E15160.F102 http://opencontext.org/projects/1B426 Çatalhöyük

16 http://opencontext.org/subjects/BB97AF04-07E15160.F103 http://opencontext.org/projects/1B426 Çatalhöyük

17 http://opencontext.org/subjects/57BBFF8A-1A715160.F104 http://opencontext.org/projects/1B426 Çatalhöyük

18 http://opencontext.org/subjects/9A4DE123-CA15160.F105 http://opencontext.org/projects/1B426 Çatalhöyük

19 http://opencontext.org/subjects/25F21C15-F4415160.F106 http://opencontext.org/projects/1B426 Çatalhöyük

20 http://opencontext.org/subjects/3869D3CE-AF515160.F107 http://opencontext.org/projects/1B426 Çatalhöyük

21 http://opencontext.org/subjects/761A31FF-93315160.F108 http://opencontext.org/projects/1B426 Çatalhöyük

22 http://opencontext.org/subjects/08EF979D-FAF15160.F109 http://opencontext.org/projects/1B426 Çatalhöyük

23 http://opencontext.org/subjects/D37E8EFD-DF515160.F111 http://opencontext.org/projects/1B426 Çatalhöyük

24 http://opencontext.org/subjects/2E38570B-55515160.F110 http://opencontext.org/projects/1B426 Çatalhöyük

25 http://opencontext.org/subjects/5E93CFDD-E5715160.F111 http://opencontext.org/projects/1B426 Çatalhöyük

26 http://opencontext.org/subjects/9DEF875E-36215160.F112 http://opencontext.org/projects/1B426 Çatalhöyük

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28 http://opencontext.org/subjects/F2C973D8-87215160.F120 http://opencontext.org/projects/1B426 Çatalhöyük Zooarchaeology David Orton Turkey Çatalhöyük Mound Web

29 http://opencontext.org/subjects/208D2BC2-04F15160.F13 http://opencontext.org/projects/1B426 Çatalhöyük Zooarchaeology David Orton Turkey Çatalhöyük Mound Web

30 http://opencontext.org/subjects/6B39054F-47715160.F14 http://opencontext.org/projects/1B426 Çatalhöyük Zooarchaeology David Orton Turkey Çatalhöyük Mound Web

XML to CSV:

- Scripting (PHP) with XPath to convert many XML docs to CSV records
- Many nodes ignored, not mapped to CSV
- But! Most users use Excel, want CSV
- “Primary keys” in CSV data are Web URIs, can link back to more expressive XML representations

Browse and Filter

Click on one of the links below to further limit your view of analytic data in Open Context.

Or, type a search term in the box

Search here...

SEARCH

Sort facets alphabetically: A,B,C ↓

- EOL linked Biological Taxa
[Select Multiple](#)
 - [Bos taurus Linnaeus, 1758 \(Encyclopedia of Life\)](#) 11835
 - [Bos primigenius \(Encyclopedia of Life\)](#) 290
- Descriptive Properties
[Select Multiple](#)
 - [Element](#) 16329
 - [Taxon](#) 13763
 - [Symmetry](#) 10175
 - [Certainty](#) 7733
 - [Weathering](#) 6010
 - [Recovery](#) 5449
 - [Validity](#) 5449
 - [Side](#) 5243
 - [Species](#) 5005
 - [Class](#) 4614
 - [Fragment Size](#) 3628
 - [Element Name](#) 3601
- More...
- Context
[Select Multiple](#)
 - [Çatalhöyük](#) 6438
 - [İlipinar](#) 3601
 - [Hazor](#) 2056
 - [Domuztepe](#) 2014

Open Context currently has **21252** items, filtered by the following criteria:

- (1) Contained in: [Turkey OR Iran OR Israel OR Jordan](#) 
- (2) Biological Taxa: [Bos \(Cattle, oxen\) \(from Encyclopedia of Life\)](#); includes more specific sub-taxa 
- (3) Geo-spatial Tile: [1 \(Zoom out a tile level\)](#) 

Last Updated: September 3, 2013, 1:44 am

[View a map summary](#)

Services (not just data)

- Atom
- JSON
- GeoJSON
- KML



Atom: Standard Container

(After Wilde)



Atom: Standard Container



Services (not just data)

- URIs / URLs to resources
- Meaningful links (navigate the service, paging, further queries)
- Published, update metadata
- Widely understood XML format



One does not simply
share usable data...

Pragmatism

“Open Data” Starting Points

- Different formats good for different purposes, XML great but not ideal for all uses / communities
- HTTP URIs (Often a good way to identify things)
- REST(ish). Services provide links to follow to get data. Erik can explain more...



Noah Webster

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<http://www.flickr.com/photos/nostri-imago/3429417174>