Publishing and Pushing: Mixing Models for Communicating Research Data in Archaeology

Eric C. Kansa (@ekansa)
UC Berkeley D-Lab
& Open Context

Sarah Whitcher Kansa
The Alexandria Archive Institute
& Open Context

Benjamin Arbuckle
University of North Carolina,
Chapel Hill

Challenges in Reusing Data

1. Background
2. Data publishing workflow
3. Data curation and dynamism

Expanding Public Access to the Results of Federally Funded Research

Subscribe

Posted by Michael Stebbins on February 22, 2013 at 12:04 PM EST

E-Mail Tweet Share +

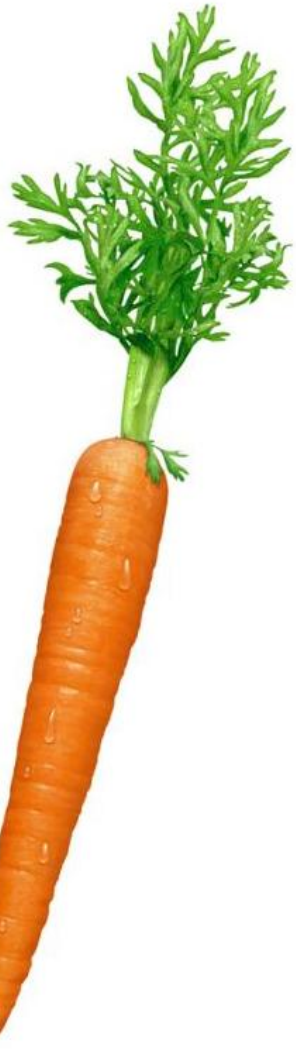
The Obama Administration is committed to the proposition that citizens deserve easy access to the results of scientific research their tax dollars have paid for. That's why, in a policy memorandum released today, OSTP Director John Holdren has directed Federal agencies with more than $100M in R&D expenditures to develop plans to make the published results of federally funded research freely available to the public within one year of publication and requiring researchers to better account for and manage the digital data resulting from federally funded scientific research. OSTP has been looking into this issue for some time, soliciting broad public input on multiple occasions and convening an interagency working group to develop a policy. The final policy reflects substantial inputs from scientists and scientific organizations, publishers, members of Congress, and other members of the public—over 65 thousand of whom recently signed a *We the People* petition asking for expanded public access to the results of taxpayer-funded research.

NSF

NATIONAL ENDOWMENT FOR THE Humanities

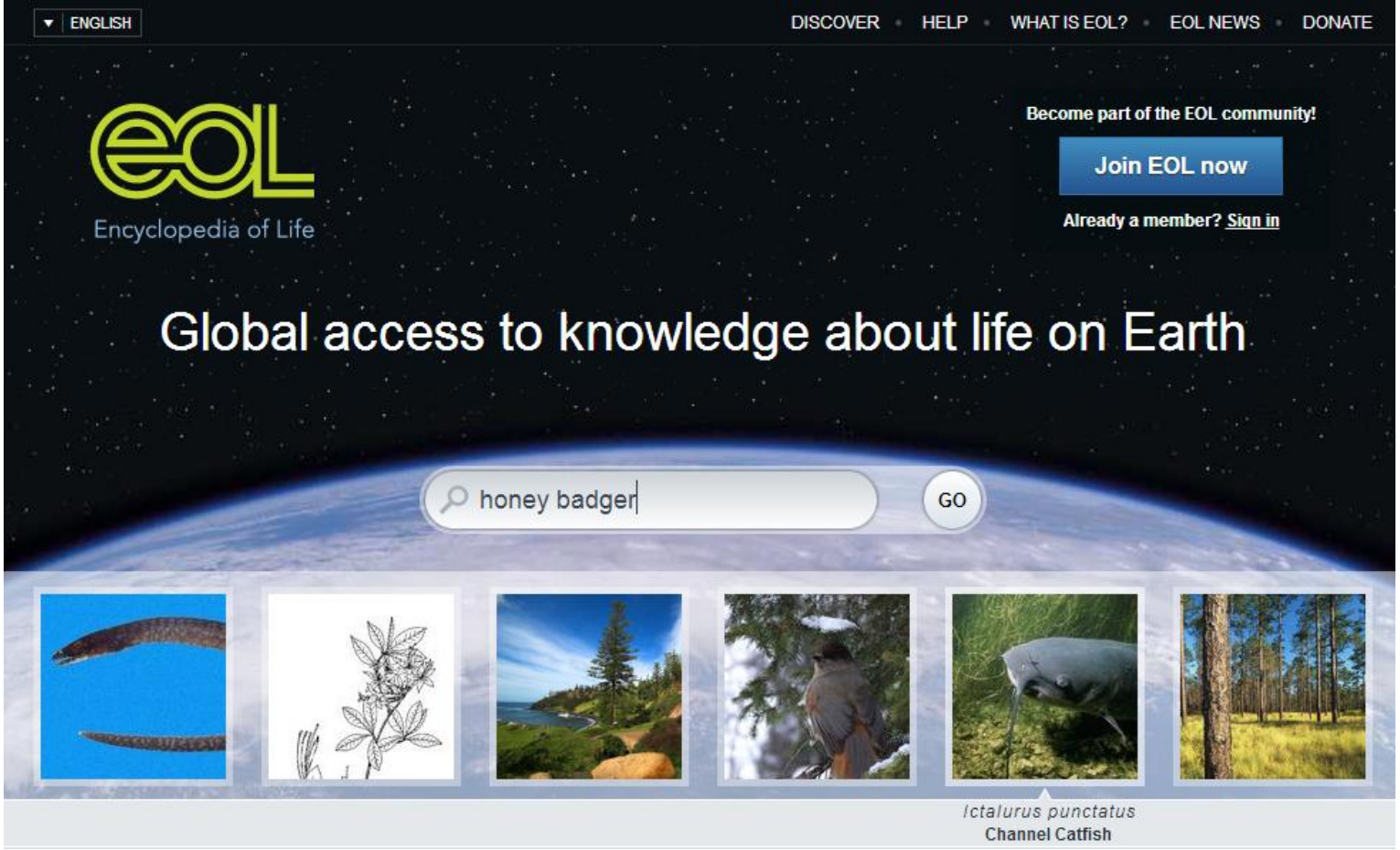
Shelby White and Leon Levy Program for Archaeological Publications


the WHITE HOUSE PRESIDENT BARACK OBAMA
THE WHITE HOUSE WASHINGTON
BLOG
PHOTOS & VIDEO
BRIEFING ROOM
ISSUES
the ADMINISTRAT
Home • The Administratio of Science and Technology Policy
Office of Scie Tec ology Policy
About OSTP
Pressroom
OSTP Blog
Divisions
Initia
R&D Budgets
Resourc
Expanding Public Access to the Results of Fe lly Funded Research
Subscribe
Posted by Michael Stebbins on February 22, 2013 at 12:04 PM EST
E-Mail
Tweet
Share
The Obama Administration is committed to the proposition that citizens deserve easy access to the results of scientific research their tax dollars have paid for. That's why, in a policy memorandum released today, OSTP Director John Holdren has directed Federal agencies with more than $100M in R&D expenditures to develop plans to make the published results of federally funded research freely available to the public within one year of publication and requiring researchers to better account for and manage the digital data resulting from federally funded scientific research. OSTP has been looking into this issue for some time, soliciting broad public input on multiple occasions and convening an interagency working group to develop a policy. The final policy reflects substantial inputs from scientists and scientific organizations, publishers, members of Congress, and other members of the public—over 65 thousand of whom recently signed a We the People petition asking for expanded public access to the results of taxpayer-funded research.
NSF
NATIONAL ENDOWMENT FOR THE Humanities
Sh by White and L n Levy Program for Archaeological Publications



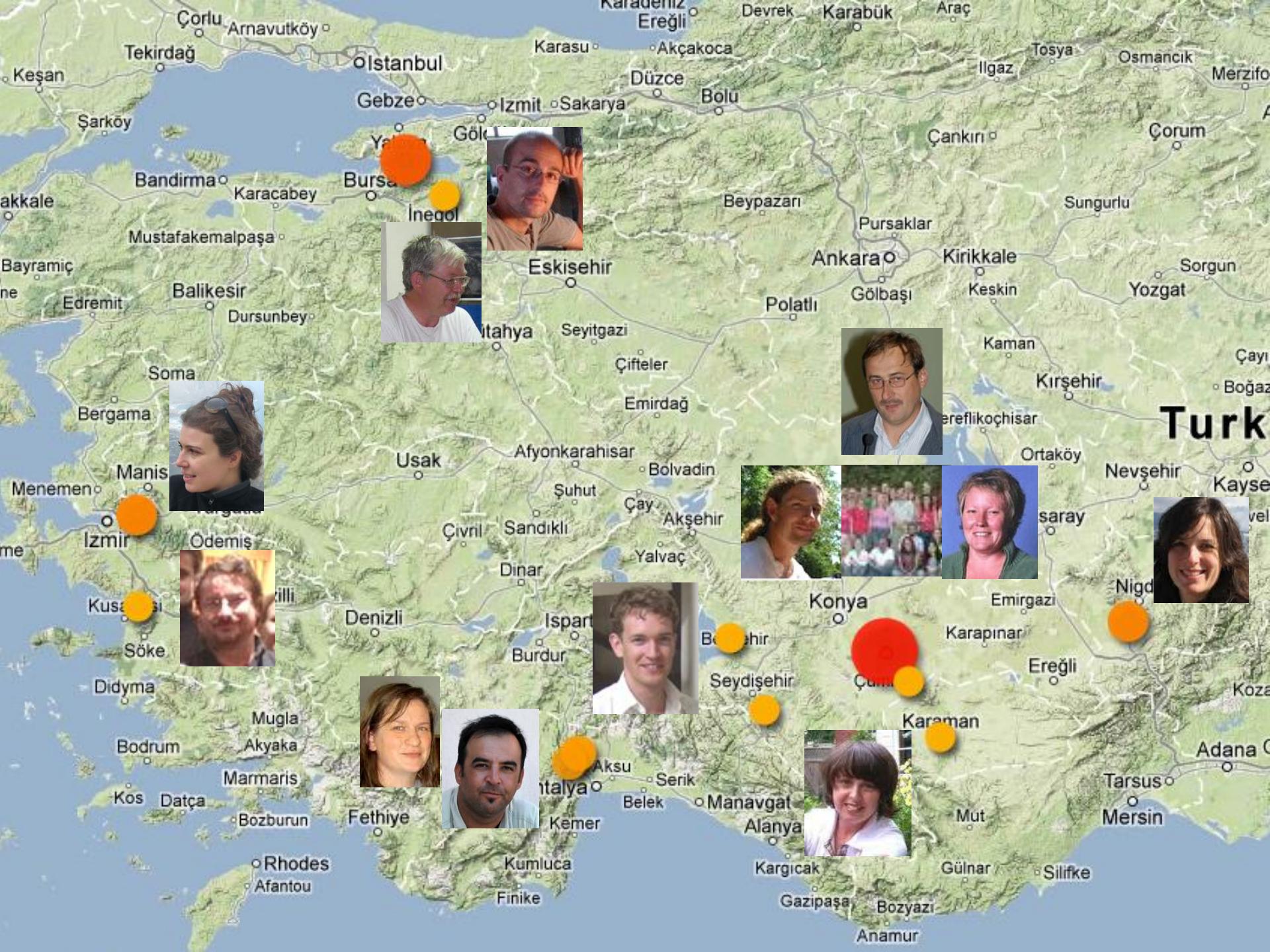
Need more carrots!

1. Citation, credit, intellectually valued
2. **Research outcomes (new insights from data reuse!)**



EOL Computable Data Challenge

(Ben Arbuckle, Sarah W. Kansa, Eric Kansa)


Çorlu
Arnavutköy
Tekirdağ
Istanbul
Karasu
Akçakoca
Ereğli
Devrek
Karabük
Araç
Tosya
Osmancık
Ilgaz
Keşan
Düzce
Bolu
Gebze
İzmit
Sakarya
Şarköy
Çankırı
Çorum
Bandırma
Karacabey
Bursa
İnegöl
Beypazarı
Sungurlu
Pursaklar
Mustafakemalpaşa
Ankara
Kirikkale
Sorgun
Bayramiç
Eskisehir
Balikesir
Edremit
Dursunbey
Gölbaşı
Keskin
Yozgat
Polatlı
Seyitgazi
Çifteler
Kaman
Kırşehir
Soma
Bergama
Emirdağ
Manisa
Usak
Afyonkarahisar
Bolvadin
Ortaköy
Nevşehir
Menemen
Şuhut
Çay
Akşehir
İzmir
Çıvril
Sandıklı
Ödemiş
Yalvaç
Dinar
Konya
Emirgazi
Karapınar
Denizli
Isparta
Burdur
Ereğli
Söke
Seydişehir
Didyma
Mugla
Akyaka
Karaman
Bodrum
Aksu
Serik
Adana
Marmaris
Belek
Manavgat
Tarsus
Kos
Datça
Fethiye
Bozburun
Kemer
Alanya
Mut
Mersin
Rhodes
Afantou
Kumluca
Kargıcak
Gülnar
Silifke
Finike
Gazipaşa
Bozyazı
Anamur

Large scale data sharing & integration for exploring the origins of farming.

Funded by EOL / NEH













1. 300,000 bone specimens
2. Complex: dozens, up to 110 descriptive fields
3. 34 contributors from 15 archaeological sites
4. More than **4 person <u>years</u>** of effort to create the data !













Turk

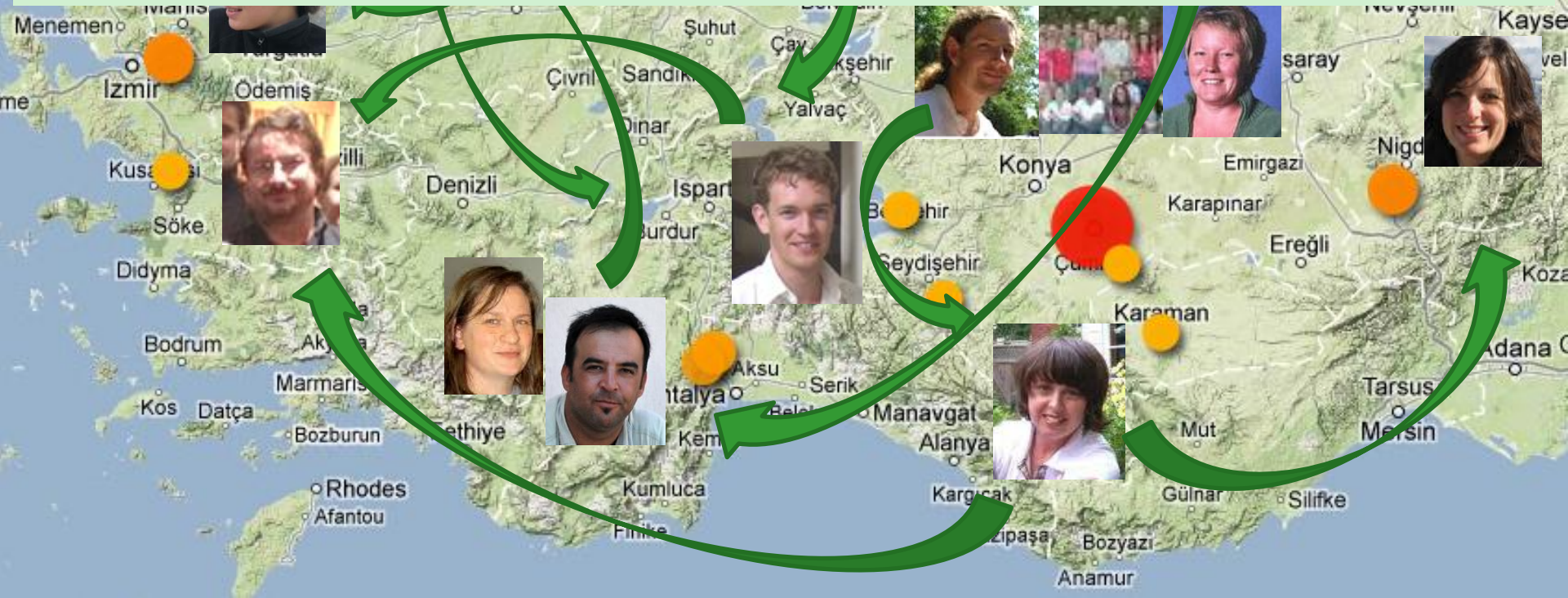

Relatively collaborative bunch, Ben Arbuckle cultivated relationships & built trust over years prior to EOL funding.
Çorlu
Arnavutköy
Tekirdağ
Istanbul
Karasu
Akçakoca
Ereğli
Devrek
Karabük
Araç
Tosya
Osmancık
Keşan
Düzce
Gebze
İzmit
Sakarya
Şarköy
Bandırma
Karacabey
Bursa
İnegöl
akkale
Mustafakemalpaşa
Bayramiç
Edremit
Dursunbey
Seyitgazi
Çifteler
Emirdağ
Polatlı
Gölbaşı
Keskin
Yozgat
Kaman
Kırşehir
Soma
Bergama
Manisa
Menemen
İzmir
Usak
Afyonkarahisar
Şuhut
Çivril
Sandıklı
Yalvaç
Ortaköy
Nevşehir
Ödemiş
Denizli
Ispart
Burdur
Konya
Emirgazi
Karapınar
Ereğli
Seydişehir
Karaman
Söke
Didyma
Bodrum
Marmaris
Kos
Datça
Bozburun
Aksu
Serik
Manavgat
Alanya
Mut
Tarsus
Mersin
Rhodes
Afantou
Kumluca
Gülnar
Silifke
Bozyazı
Anamur
Turk

DIPIR

Dissemination Information Packages for Information Reuse

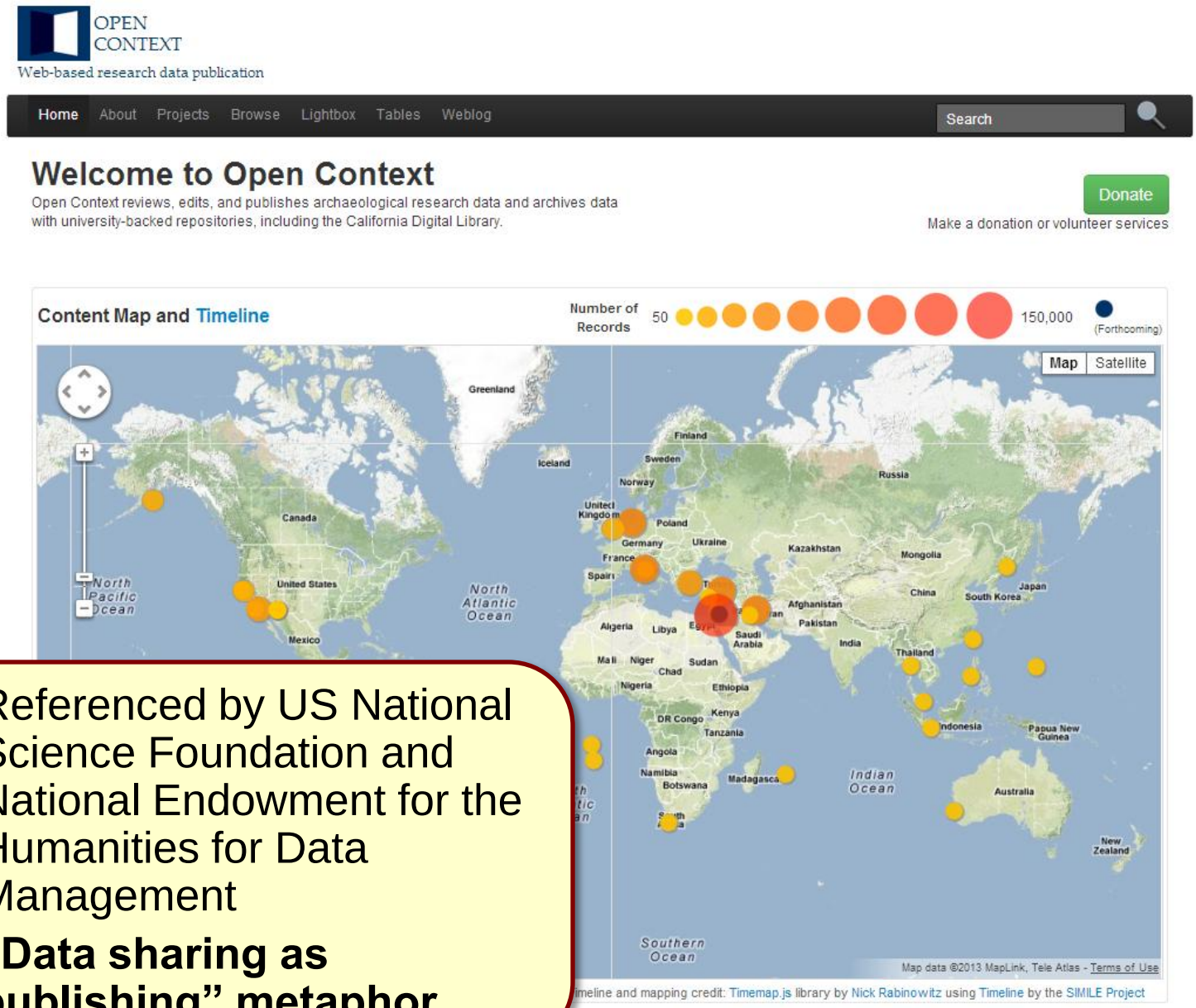
“204: Dynamics of Data Reuse when Aggregating Data through Time and Space: The Case of Archaeology and Zoology”

Elizabeth Yakel; Ixchel Faniel; Rebecca Frank



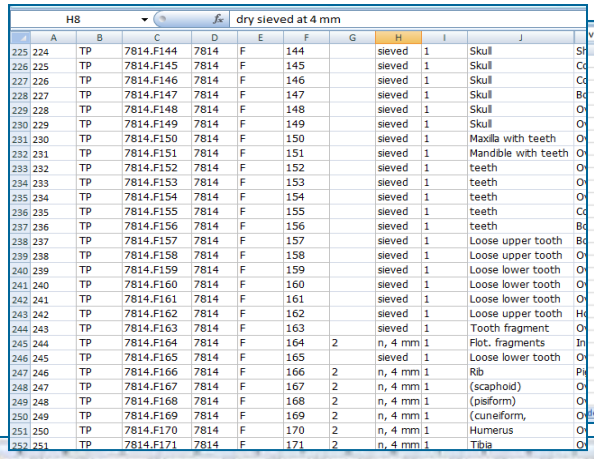
Challenges in Reusing Data

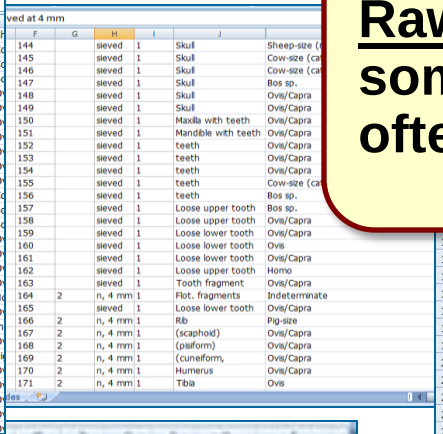
1. Background
2. Data publishing workflow
3. Data curation and dynamism

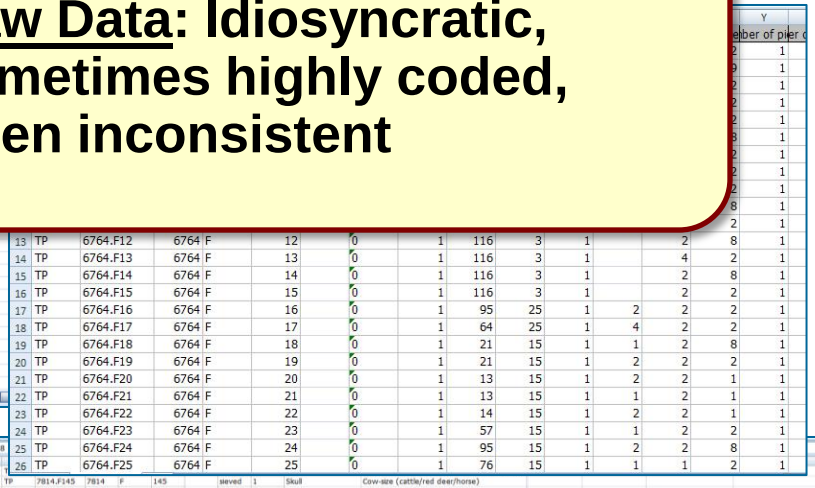


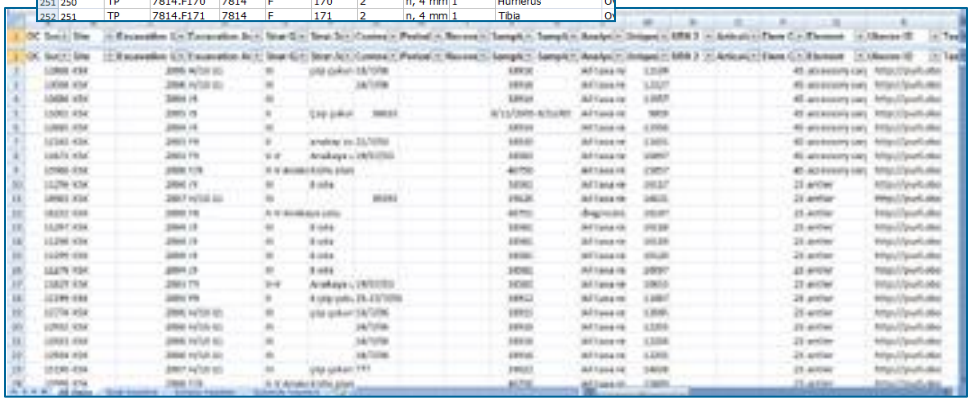
1. Referenced by US National Science Foundation and National Endowment for the Humanities for Data Management
2. **“Data sharing as publishing” metaphor**

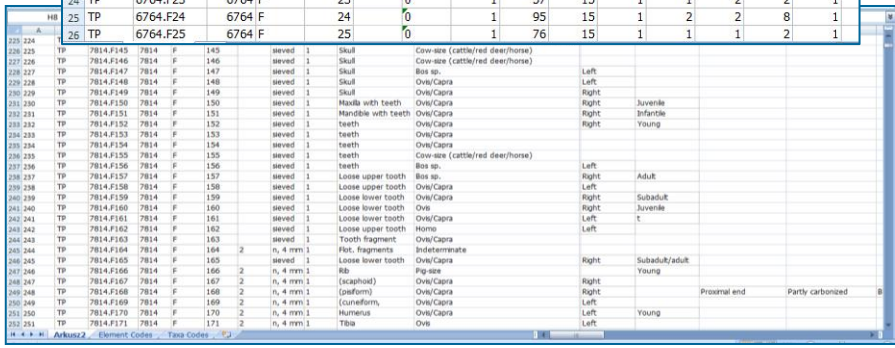
Raw Data: Idiosyncratic, sometimes highly coded, often inconsistent

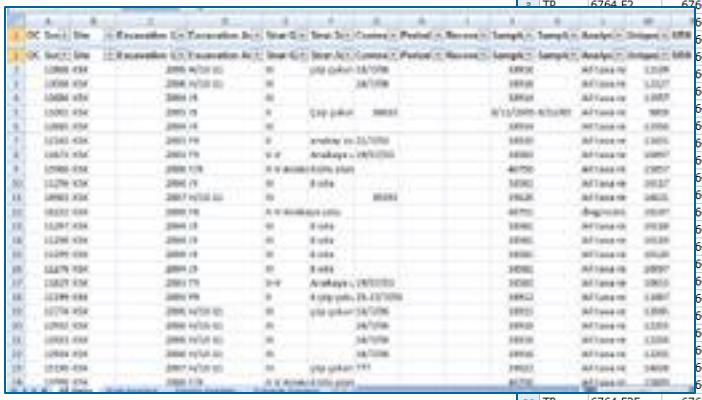


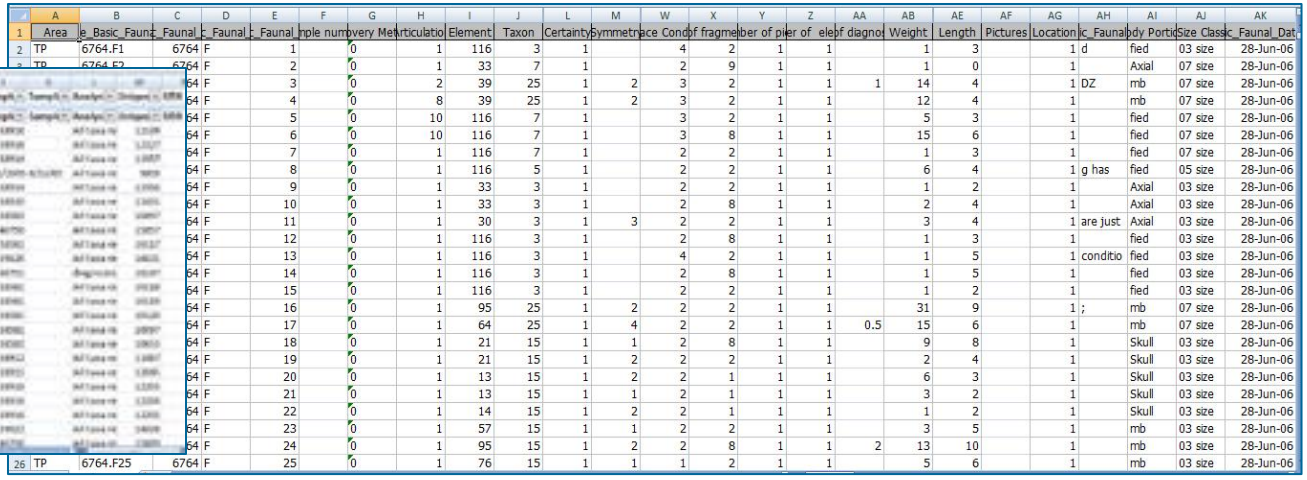






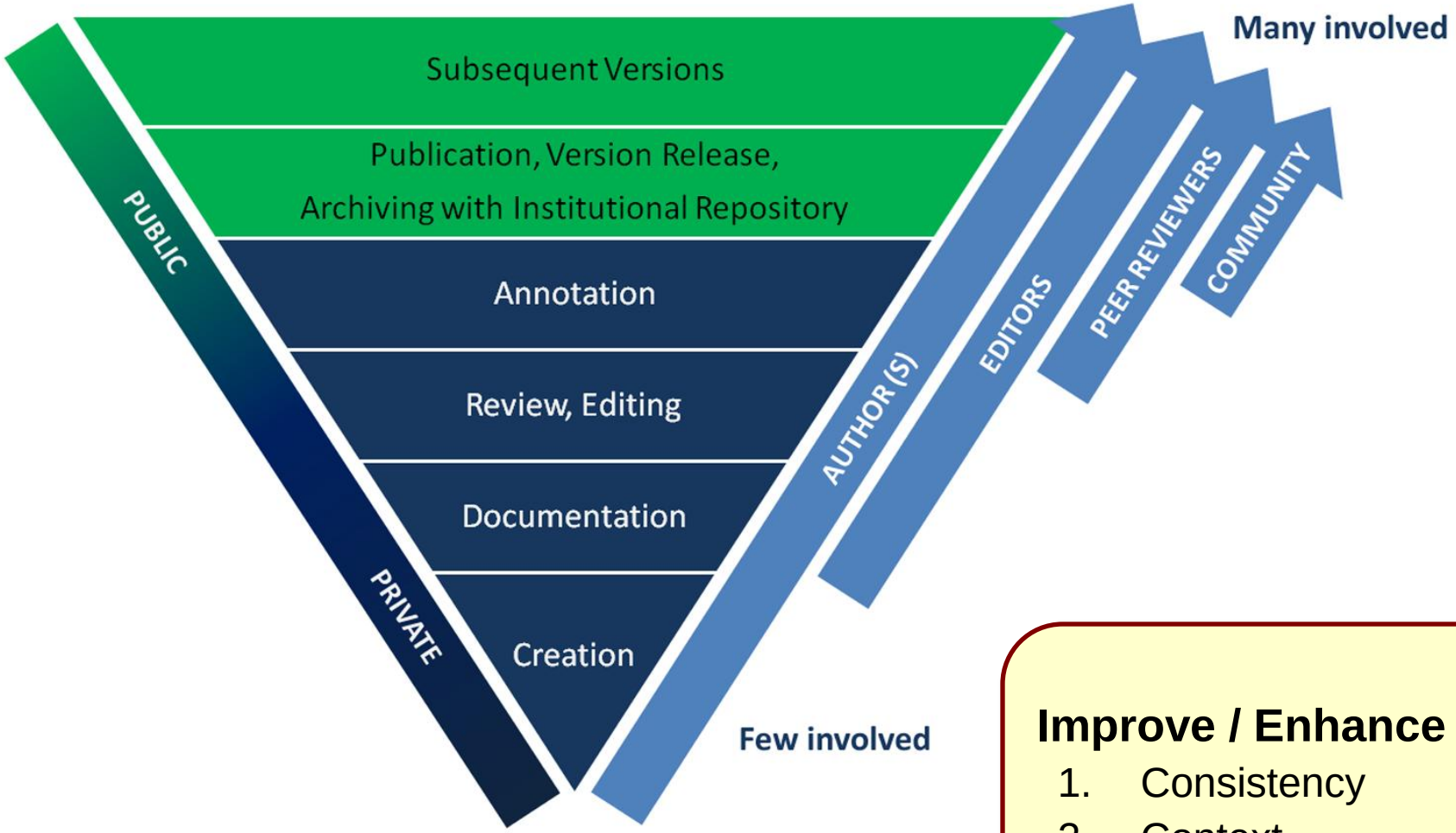






Raw Data Can Be Unappetizing

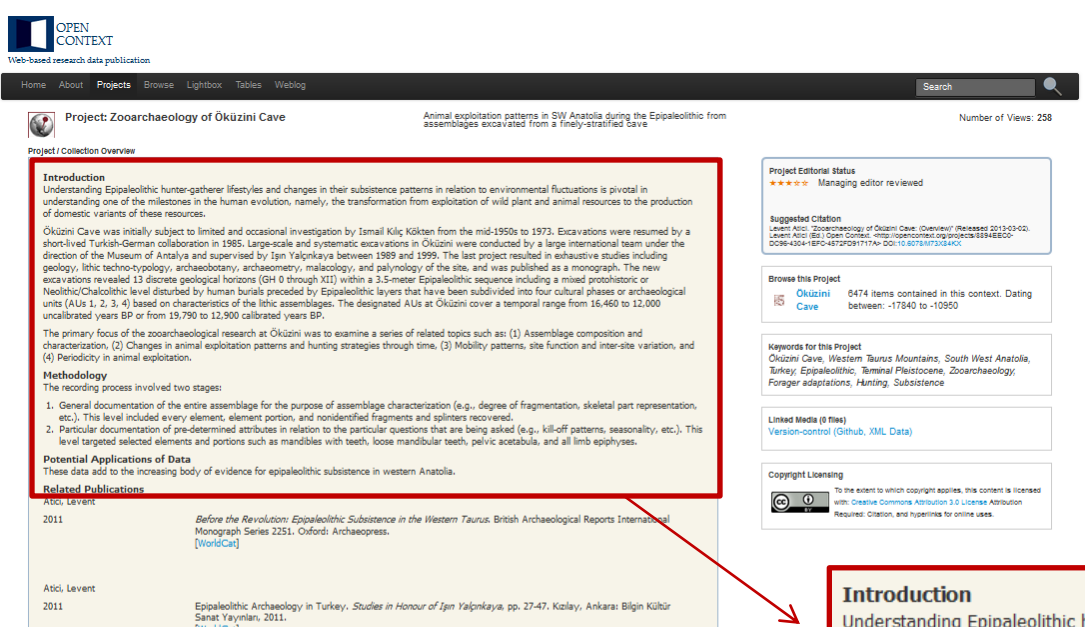
Publishing Workflow



Improve / Enhance

1. Consistency
2. Context (intelligibility)


Sometimes data is better served cooked



- **Documentation**
- Review, editing
- Annotation

Introduction

Understanding Epipaleolithic hunter-gatherer lifestyles and changes in their subsistence patterns in relation to environmental fluctuations is pivotal in understanding one of the milestones in the human evolution, namely, the transformation from exploitation of wild plant and animal resources to the production of domestic variants of these resources.

Öküzini Cave was initially subject to limited and occasional investigation by Ismail Kılıç Kökten from the mid-1950s to 1973. Excavations were resumed by a short-lived Turkish-German collaboration in 1985. Large-scale and systematic excavations in Öküzini were conducted by a large international team under the direction of the Museum of Antalya and supervised by Işın Yalçınkaya between 1989 and 1999. The last project resulted in exhaustive studies including geology, lithic techno-typology, archaeobotany, archaeometry, malacology, and palynology of the site, and was published as a monograph. The new excavations revealed 13 discrete geological horizons (GH 0 through XII) within a 3.5-meter Epipaleolithic sequence including a mixed protohistoric or Neolithic/Chalcolithic level disturbed by human burials preceded by Epipaleolithic layers that have been subdivided into four cultural phases or archaeological units (AUs 1, 2, 3, 4) based on characteristics of the lithic assemblages. The designated AUs at Öküzini cover a temporal range from 16,460 to 12,000 uncalibrated years BP or from 19,790 to 12,900 calibrated years BP.

The primary focus of the zooarchaeological research at Öküzini was to examine a series of related topics such as: (1) Assemblage composition and characterization, (2) Changes in animal exploitation patterns and hunting strategies through time, (3) Mobility patterns, site function and inter-site variation, and (4) Periodicity in animal exploitation.

Methodology

The recording process involved two stages:

1. General documentation of the entire assemblage for the purpose of assemblage characterization (e.g., degree of fragmentation, skeletal part representation, etc.). This level included every element, element portion, and nonidentified fragments and splinters recovered.
2. Particular documentation of pre-determined attributes in relation to the particular questions that are being asked (e.g., kill-off patterns, seasonality, etc.). This level targeted selected elements and portions such as mandibles with teeth, loose mandibular teeth, pelvic acetabula, and all limb epiphyses.

Potential Applications of Data

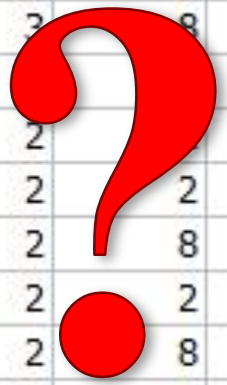
These data add to the increasing body of evidence for epipaleolithic subsistence in western Anatolia.

I	J	L	M	W	X	Y	Z	AA	AB	AE
Element	Taxon	Certainty	Symmetry	ace Cond	f fragme	ber of				
116	3	1		4	2					
33	7	1		2	9					
39	25	1	2	3	2					
39	25	1	2	3	2					
116	7	1		3	2					
116	7	1		3	8					
116	7	1		2	2	1	1		1	3
116	5	1		2	2	1	1		6	4
33	3	1		2	2	1	1		1	2
33	3	1		2	8	1	1		2	4
30	3	1	3	2	2	1	1		3	4
116	3	1		2	8	1	1		1	3
116	3	1		4	2	1	1		1	5
116	3	1		2	8	1	1		1	5
116	3	1		2	2	1	1		1	2
95	25	1	2	2	2	1	1		31	9
64	25	1	4	2	2	1	1	0.5	15	6
21	15	1	1	2	8	1	1		9	8

- Documentation
- **Review, editing**
- Annotation

I	J	L	M	W	X	Y	Z	AA	AB	AE
Element	Taxon	Certainty	Symmetry	ace Cond	f fragme	ber of				
116	3	1		4	2					
33	7	1		2	9					
39	25	1	2	3	2					
39	25	1	2	3	2					
116	7	1		3	2					
116	7	1		3	8					
116	7	1				1	1		1	3
116	5	1		2		1	1		6	4
33	3	1		2	2	1	1		1	2
33	3	1		2	8	1	1		2	4
30	3	1	3	2	2	1	1		3	4
116	3	1		2	8	1	1		1	3
116	3	1		4	2	1	1		1	5
116	3	1		2	8	1	1		1	5
116	3	1		2	2	1	1		1	2
95	25	1	2	2	2	1	1		31	9
64	25	1	4	2	2	1	1	0.5	15	6
21	15	1	1	2	8	1	1		9	8

- Documentation
- **Review, editing**
- Annotation



J	L	P	R	U	V
Element	Taxon	Symmetry	Age	Location of burning	Type of burning
Long bone	Sheep-size (medium dog to medium sheep)				
Rib	Cow-size (cattle/red deer/horse)				
Radius	Bos sp.	Left			
Radius	Bos sp.	Left			
Long bone	Cow-size (cattle/red deer/horse)				
Long bone	Cow-size (cattle/red deer/horse)				
Long bone	Cow-size (cattle/red deer/horse)				
Long bone	Pig-size				
Rib	Sheep-size (medium dog to medium sheep)				
Rib	Sheep-size (medium dog to medium sheep)				
Lumbar vertebra	Sheep-size (medium dog to medium sheep)	Central	Young		Burnt
Long bone	Sheep-size (medium dog to medium sheep)			Shaft	Partly burnt
Long bone	Sheep-size (medium dog to medium sheep)				
Long bone	Sheep-size (medium dog to medium sheep)		Young		
Long bone	Sheep-size (medium dog to medium sheep)				
Metatarsal III+IV	Bos sp.	Left			
phalanx	Bos sp.	Left lateral			
teeth	Ovis/Capra	Right			
teeth	Ovis/Capra	Left	Juvenile		
Loose upper tooth	Ovis/Capra	Left	t		
Loose upper tooth	Ovis/Capra	Right	Infantile		
Loose lower tooth	Ovis/Capra	Left	Old		
Metacarpal III+IV	Ovis/Capra	Right			
Metatarsal III+IV	Ovis/Capra	Left	Infantile/juvenile		
Tibia	Ovis/Capra	Right			

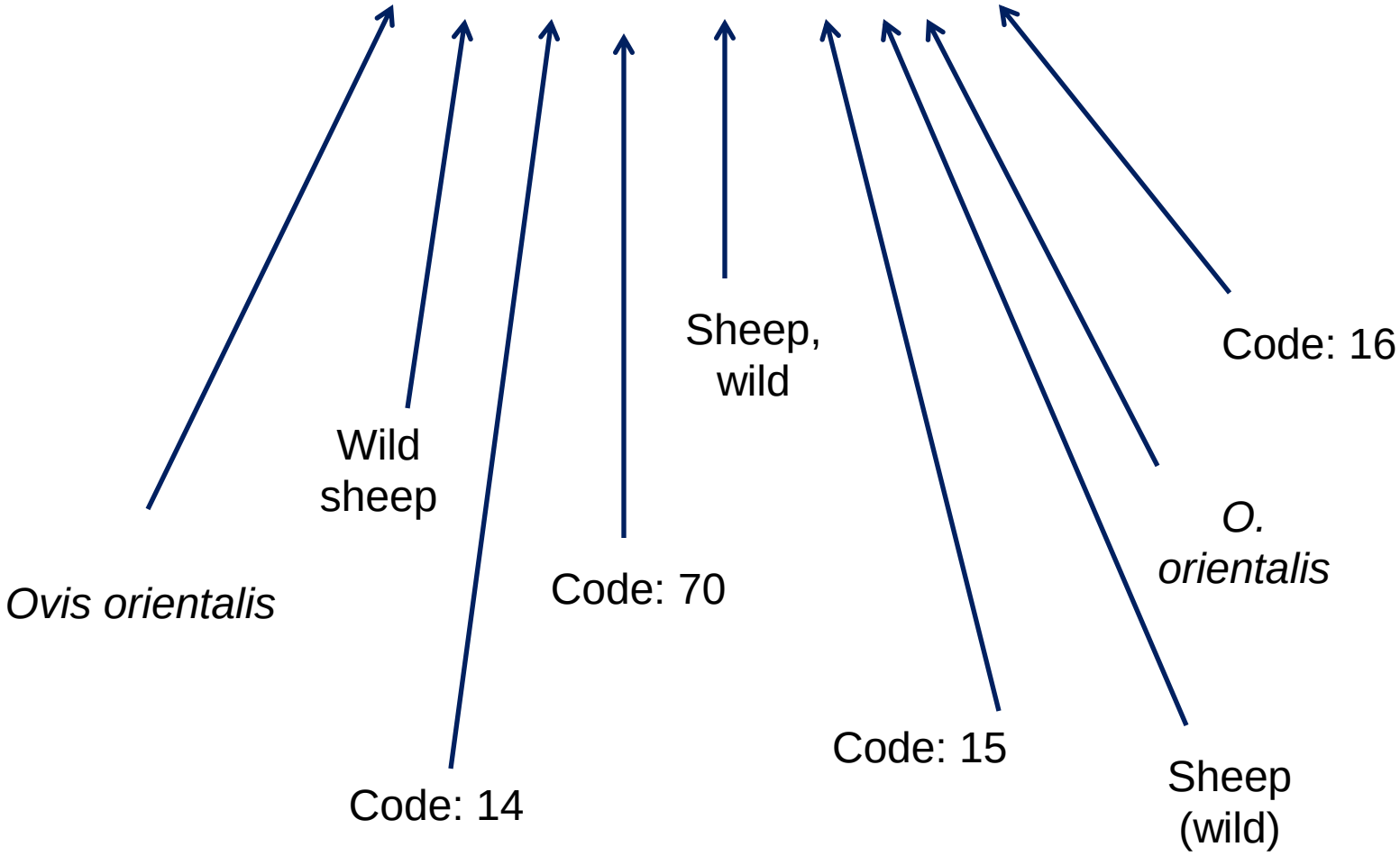
- Documentation
- **Review, editing**
- Annotation

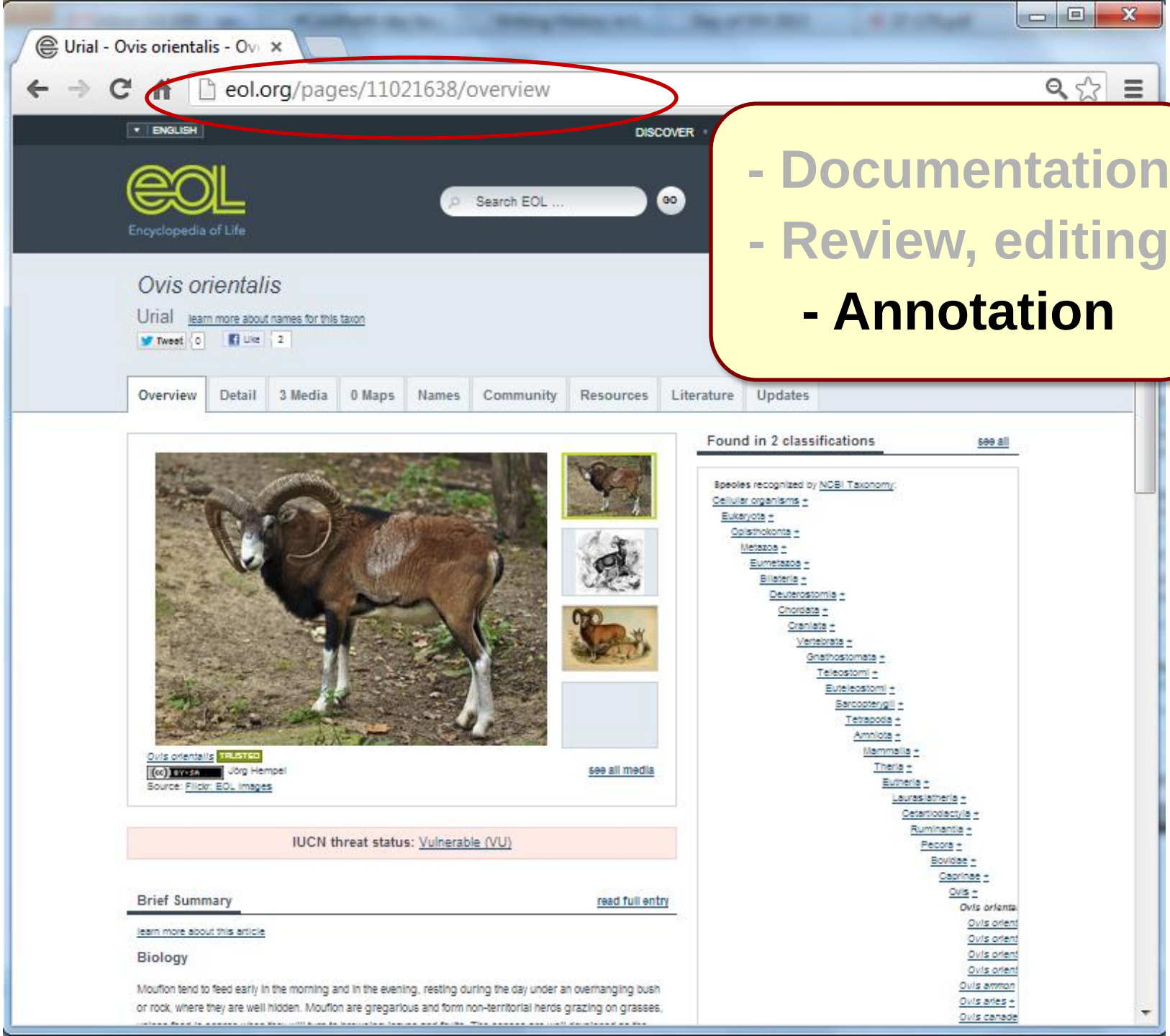
J	L	P	R	U	V
Element	Taxon	Symmetry	Age	Location of burning	Type of burning
Long bone	Sheep-size (medium dog to medium sheep)				
Rib	Cow-size (cattle/red deer/horse)				
Radius	Bos sp.	Left			
Radius	Bos sp.	Left			
Long bone	Cow-size (cattle/red deer/horse)				
Long bone	Cow-size (cattle/red deer/horse)				
Long bone	Cow-size (cattle/red deer/horse)				
Long bone	Pig-size				
Rib	Sheep-size (medium dog to medium sheep)				
Rib	Sheep-size (medium dog to medium sheep)				
Lumbar vertebra	Sheep-size (medium dog to medium sheep)	Central	Young		Burnt
Long bone	Sheep-size (medium dog to medium sheep)			Shaft	Partly burnt
Long bone	Sheep-size (medium dog to medium sheep)				
Long bone	Sheep-size (medium dog to medium sheep)		Young		
Long bone	Sheep-size (medium dog to medium sheep)				
Metatarsal III+IV	Bos sp.	Left			
phalanx	Bos sp.	Left lateral			
teeth	Ovis/Capra	Right			
teeth	Ovis/Capra	Left	Juvenile		
Loose upper tooth	Ovis/Capra	Left	t		
Loose upper tooth	Ovis/Capra	Right	Infantile		
Loose lower tooth	Ovis/Capra	Left	Old		
Metacarpal III+IV	Ovis/Capra	Right			
Metatarsal III+IV	Ovis/Capra	Left	Infantile/juvenile		
Tibia	Ovis/Capra	Right			

- Documentation
- **Review, editing**
- Annotation

Decoding: Time consuming effort;
10 times (!) longer…

“Ovis orientalis”

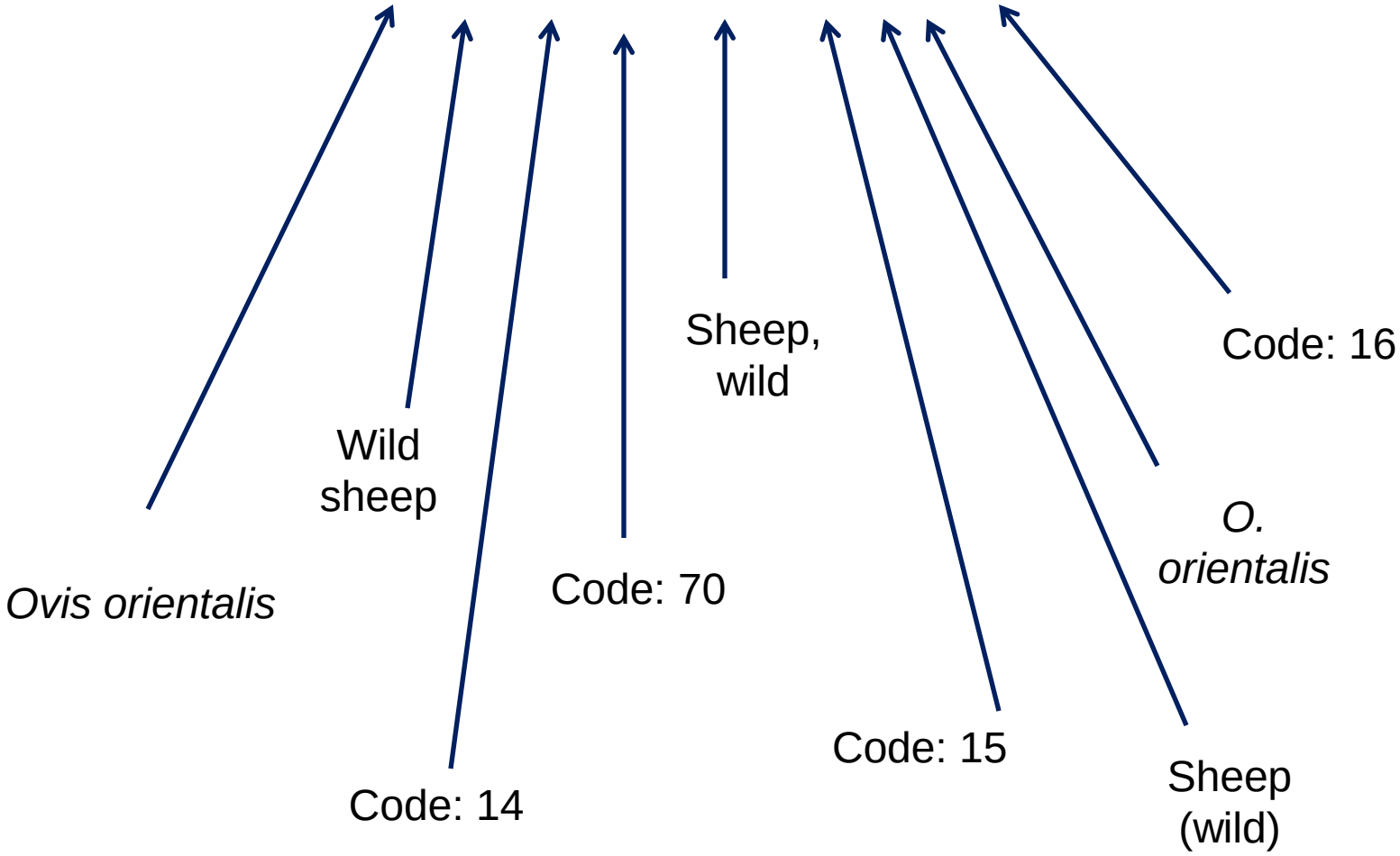




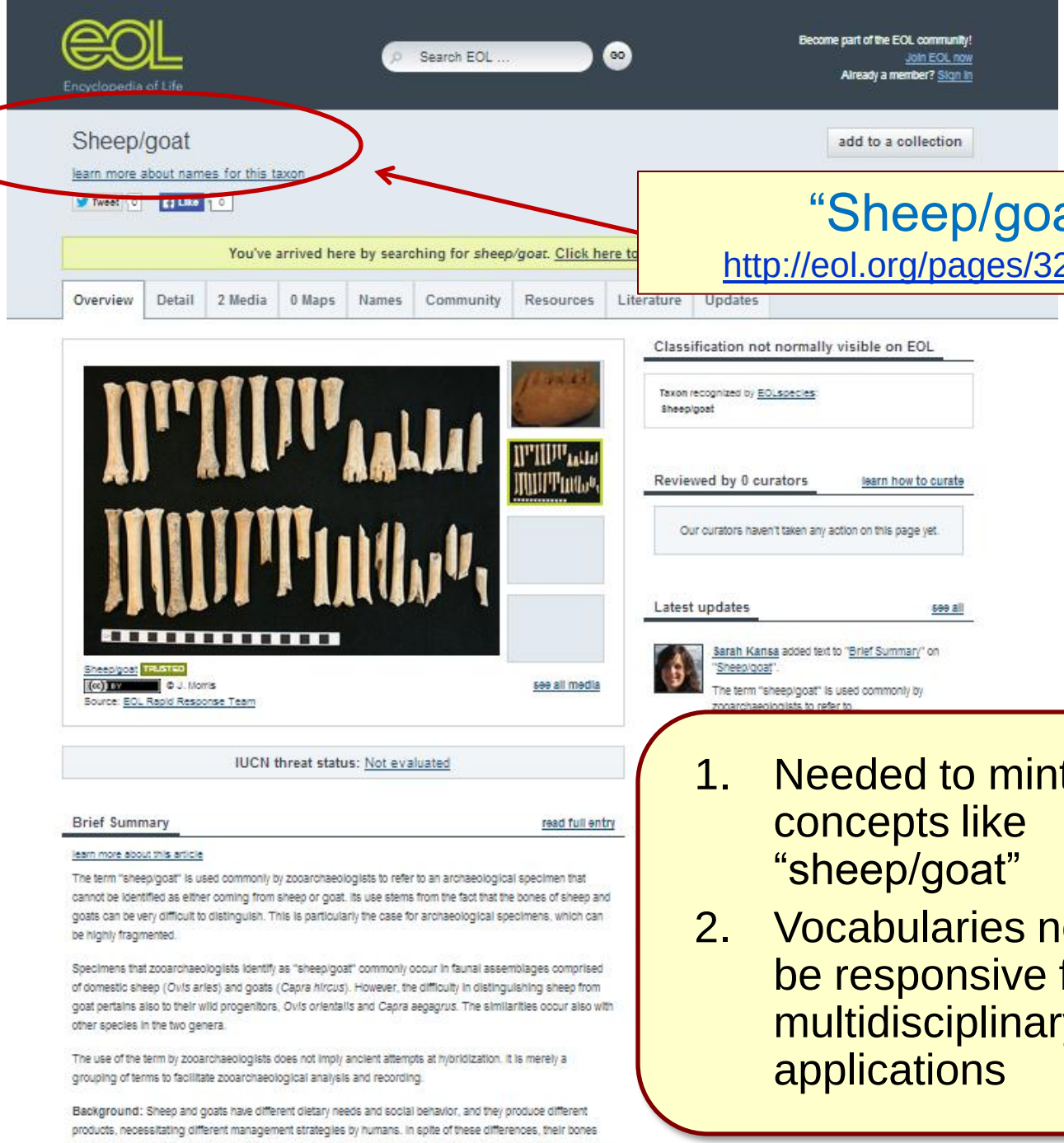
- Documentation
- Review, editing
- **Annotation**

“Ovis orientalis”

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



- **Controlled vocabulary**
- **Linked Data applications**



"Sheep/goat"
http://eol.org/pages/32609438/

1. Needed to mint new concepts like "sheep/goat"
2. Vocabularies need to be responsive for multidisciplinary applications

Item: Bone J8c22-31
Class: Animal Bone

Project: Zooarchaeology of Öküzini Cave
Number of Views: 5

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

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 Persons / Organizations (1)

Levent Atici, *Principle Author / Analyst*

Project Editorial Status
★★★☆☆ Managing editor reviewed

Suggested Citation
Levent Atici. "Zooarchaeology of Öküzini Cave: Bone J8c22-31 (Animal Bone)" (Released 2013-02-27). Levent Atici (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.

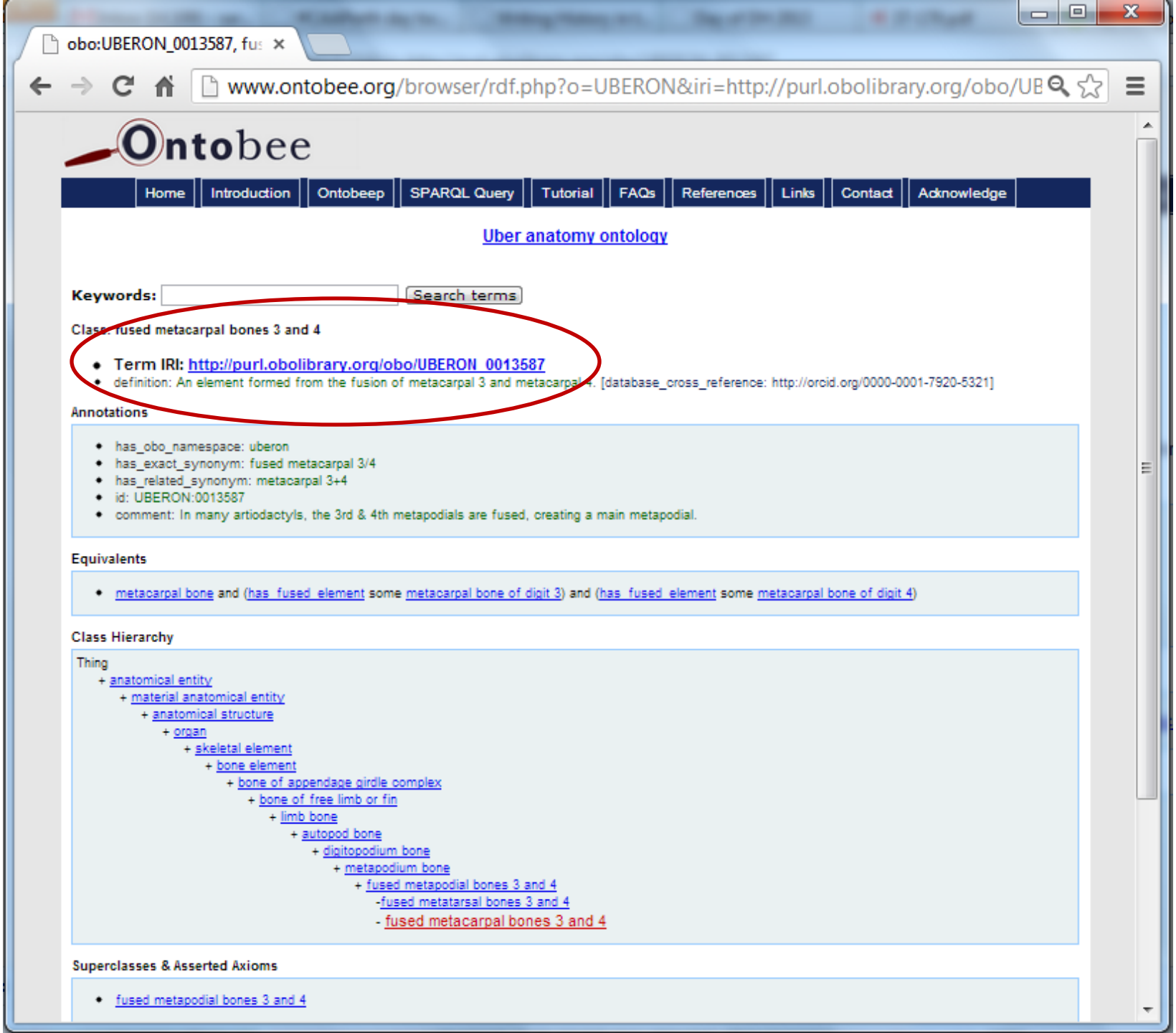
Linked Data:
Open Context Zooarchaeology Annotations-Has anatomical identification :: UBERON (Uber Anatomy Ontology)- fused metatarsal bones 3 and 4

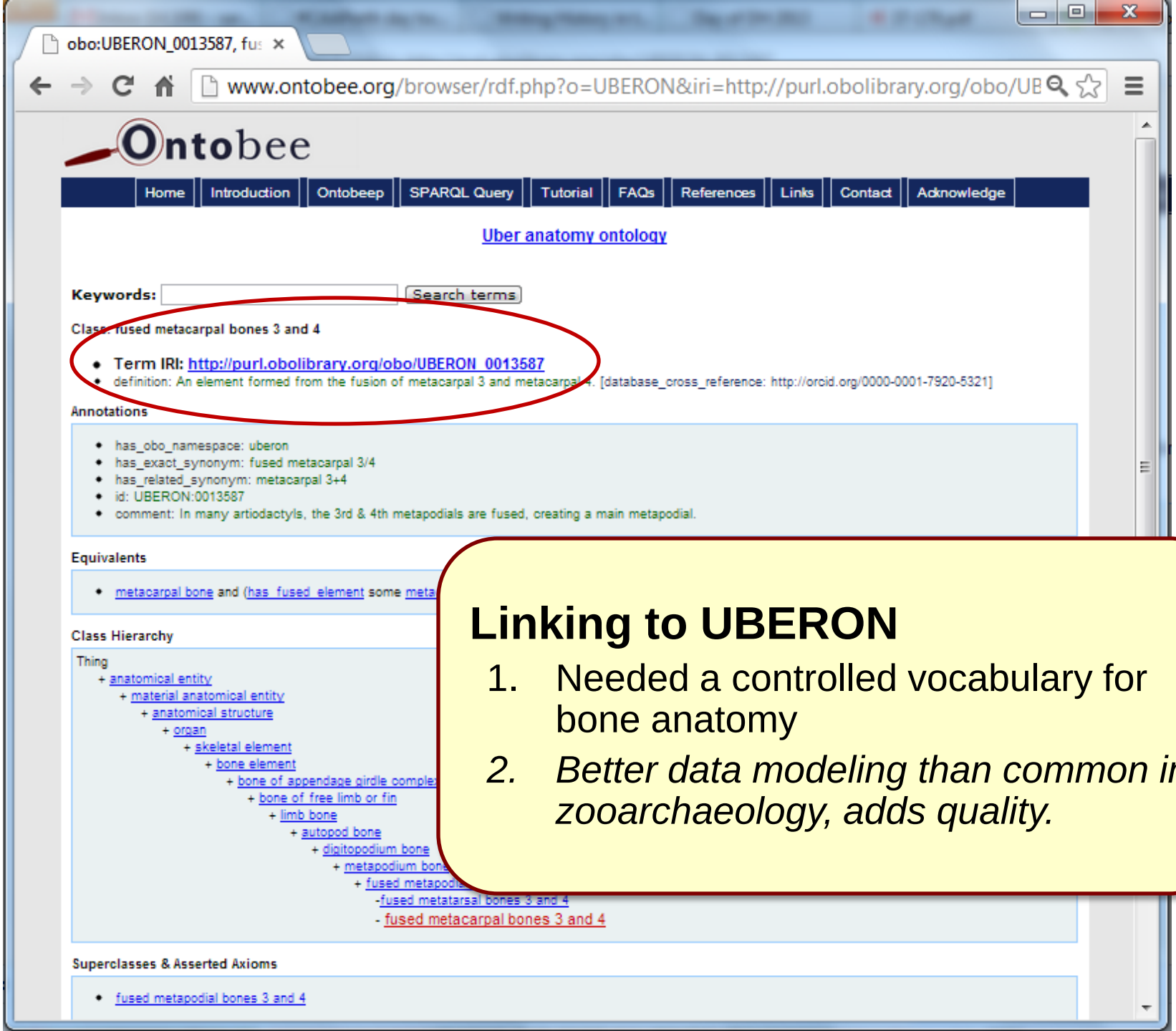
Biological Taxonomy Vocabulary-Has Biological Taxonomy :: Encyclopedia of Life- Ovis orientalis

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

Linked Media (0)
ArchaeoML (XML) Version

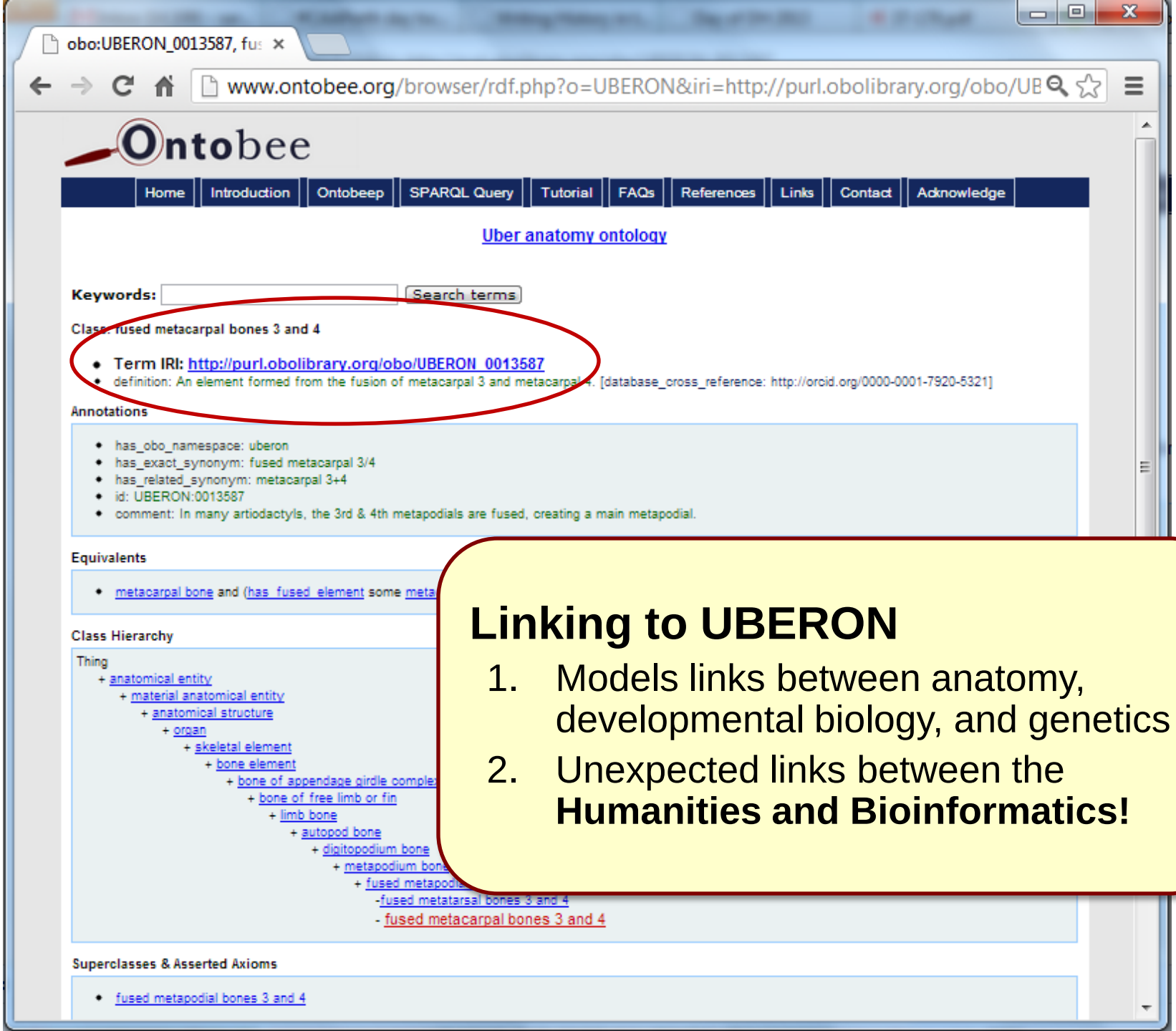
Version-control (Github, XML Data)


obo:UBERON_0013587, fus
www.ontobee.org/browser/rdf.php?o=UBERON&iri=http://purl.obolibrary.org/obo/UB
Ontobee
Home
Introduction
Ontobeep
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_obo_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



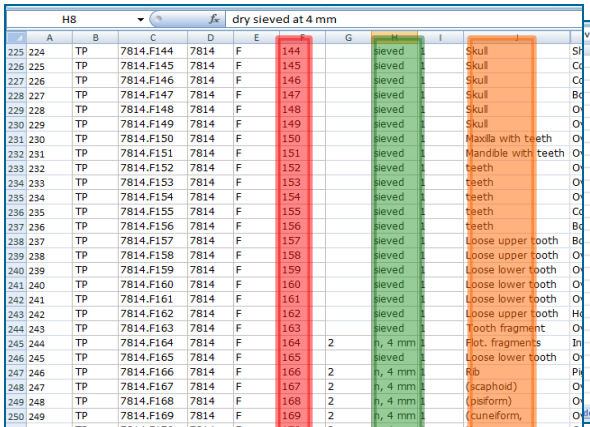
Linking to UBERON

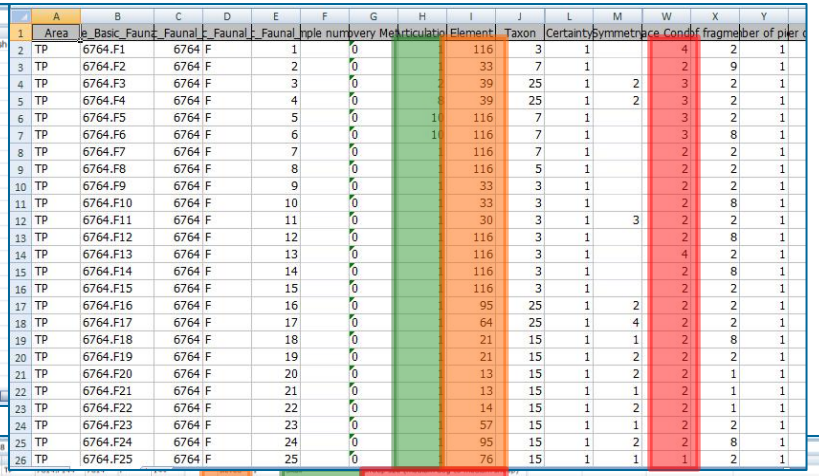
1. Needed a controlled vocabulary for bone anatomy
2. *Better data modeling than common in zooarchaeology, adds quality.*

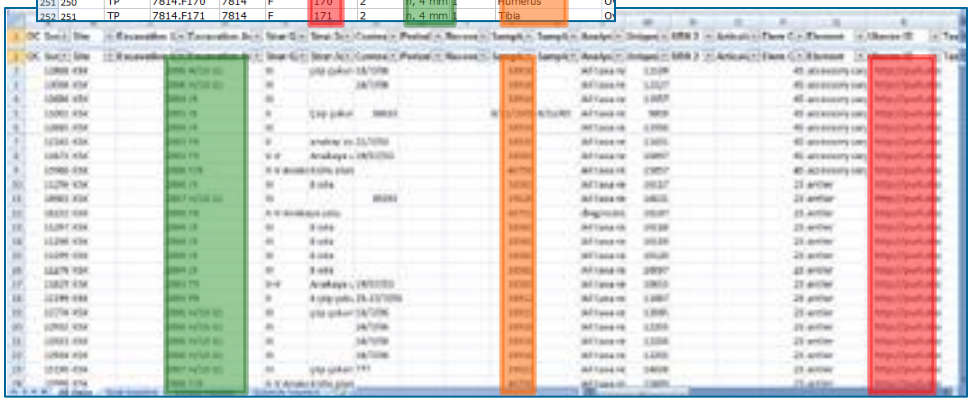


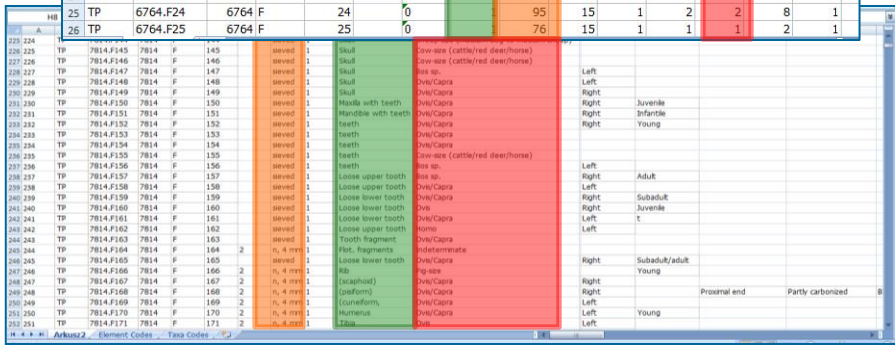
Linking to UBERON

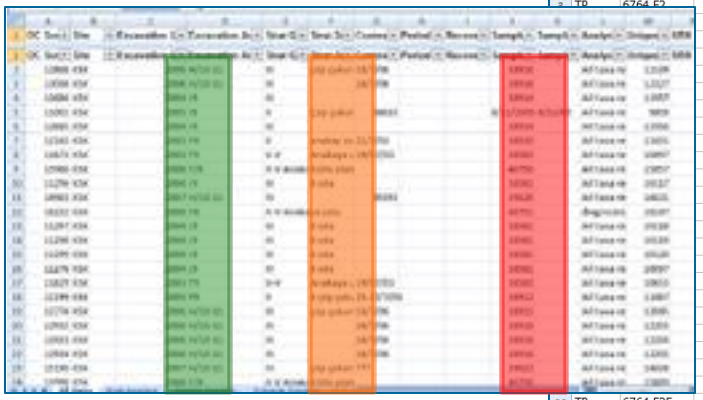
1. Models links between anatomy, developmental biology, and genetics
2. Unexpected links between the **Humanities and Bioinformatics!**











Area	le_Basic_Fauna	_Faunal	_Faunal	_Faunal	mple num	very Met	rticulatio	Element	Taxon	Certainty	Symmetr	ace Cond	f fragme	ber of pier of	elef	diagnot	Weight	Length	Pictures	Location	ic_Faunal	dy Portio	Size Classic	_Faunal_Dat
TP	6764.F1	6764	F		1	0	1	116	3	1		4	2	1	1		1	3		1	d	fied	03 size	28-Jun-06
TP	6764.F2	6764	F		2	0	1	33	7	1		2	9	1	1		1	0		1	Axial	07 size	28-Jun-06
TP	6764.F3	6764	F		3	0	2	39	25	1	2	3	2	1	1	1	14	4		1	DZ	mb	07 size	28-Jun-06
TP	6764.F4	6764	F		4	0	8	39	25	1	2	3	2	1	1		12	4		1		mb	07 size	28-Jun-06
TP	6764.F5	6764	F		5	0	10	116	7	1		3	2	1	1		5	3		1		fied	07 size	28-Jun-06
TP	6764.F6	6764	F		6	0	10	116	7	1		3	8	1	1		15	6		1		fied	07 size	28-Jun-06
TP	6764.F7	6764	F		7	0	1	116	7	1		2	2	1	1		1	3		1		fied	07 size	28-Jun-06
TP	6764.F8	6764	F		8	0	1	116	5	1		2	2	1	1		6	4		1	g has	fied	05 size	28-Jun-06
TP	6764.F9	6764	F		9	0	1	33	3	1		2	2	1	1		1	2		1		Axial	03 size	28-Jun-06
TP	6764.F10	6764	F		10	0	1	33	3	1		2	8	1	1		2	4		1		Axial	03 size	28-Jun-06
TP	6764.F11	6764	F		11	0	1	30	3	1	3	2	2	1	1		3	4		1	are just	Axial	03 size	28-Jun-06
TP	6764.F12	6764	F		12	0	1	116	3	1		2	8	1	1		1	3		1		fied	03 size	28-Jun-06
TP	6764.F13	6764	F		13	0	1	116	3	1		4	2	1	1		1	5		1	conditio	fied	03 size	28-Jun-06
TP	6764.F14	6764	F		14	0	1	116	3	1		2	8	1	1		1	5		1		fied	03 size	28-Jun-06
TP	6764.F15	6764	F		15	0	1	116	3	1		2	2	1	1		1	2		1		fied	03 size	28-Jun-06
TP	6764.F16	6764	F		16	0	1	95	25	1	2	2	2	1	1		31	9		1	;	mb	07 size	28-Jun-06
TP	6764.F17	6764	F		17	0	1	64	25	1	4	2	2	1	1	0.5	15	6		1		mb	07 size	28-Jun-06
TP	6764.F18	6764	F		18	0	1	21	15	1	1	2	8	1	1		9	8		1		Skull	03 size	28-Jun-06
TP	6764.F19	6764	F		19	0	1	21	15	1	2	2	2	1	1		2	4		1		Skull	03 size	28-Jun-06
TP	6764.F20	6764	F		20	0	1	13	15	1	2	2	1	1	1		6	3		1		Skull	03 size	28-Jun-06
TP	6764.F21	6764	F		21	0	1	13	15	1	1	2	1	1	1		3	2		1		Skull	03 size	28-Jun-06
TP	6764.F22	6764	F		22	0	1	14	15	1	2	2	1	1	1		1	2		1		Skull	03 size	28-Jun-06
TP	6764.F23	6764	F		23	0	1	57	15	1	1	2	2	1	1		3	5		1		mb	03 size	28-Jun-06
TP	6764.F24	6764	F		24	0	1	95	15	1	2	2	8	1	1	2	13	10		1		mb	03 size	28-Jun-06
TP	6764.F25	6764	F		25	0	1	76	15	1	1	1	2	1	1		5	6		1		mb	03 size	28-Jun-06

OPEN CONTEXT

Web-based research data publication

Home | About | Projects | **Browse** | Lightbox | Tables | Weblog

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
  - Sus scrofa domesticus (Encyclopedia of Life) 8155
  - Sus scrofa (Encyclopedia of Life) 1346
  - Sus (Encyclopedia of Life) 1236
- Descriptive Properties
  Select Multiple
  - Element 5572
  - Side 5394
  - Taxon 5299
  - Species 5157
  - Class 4901
  - Element Name 4901
  - Period 4901
  - Probable Species 4901
  - Square 4901
  - Sex 3205
  - Fusion 3118
  - Age (rough) 1847

  More...
- Context
  Select Multiple
  - Ilıpınar 4901
  - Domuztepe 1745
  - Ulucak 1263
  - Çatalhöyük 1085
  - Kenan Tepe 948
  - Erbaba Höyük 394
  - Çukuriçi Höyük 207
  - Barcın Höyük 67
  - Köşk Höyük 32
  - Suberde 32

  More...

Open Context currently has **10737** items, filtered by the following criteria:

(1) Contained in:	Turkey
(2) Geo-spatial Tile:	1 (Zoom out a tile level)
(3) Biological Taxa:	Suidae (Hogs, pigs) (*from Encyclopedia of Life*); includes more specific sub-taxa

Last Updated: *October 29, 2013, 9:28 am*

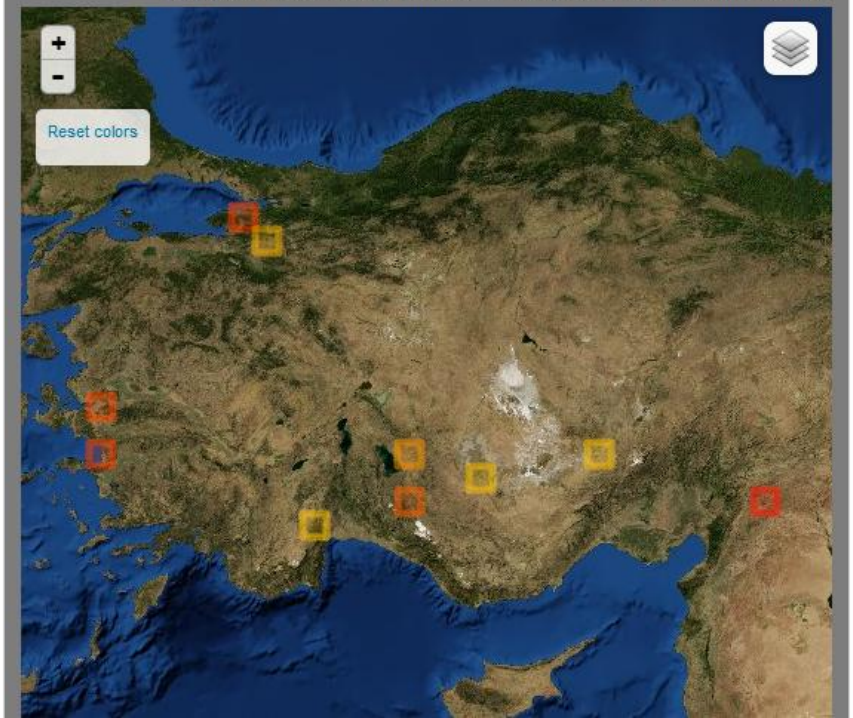
View a map summary

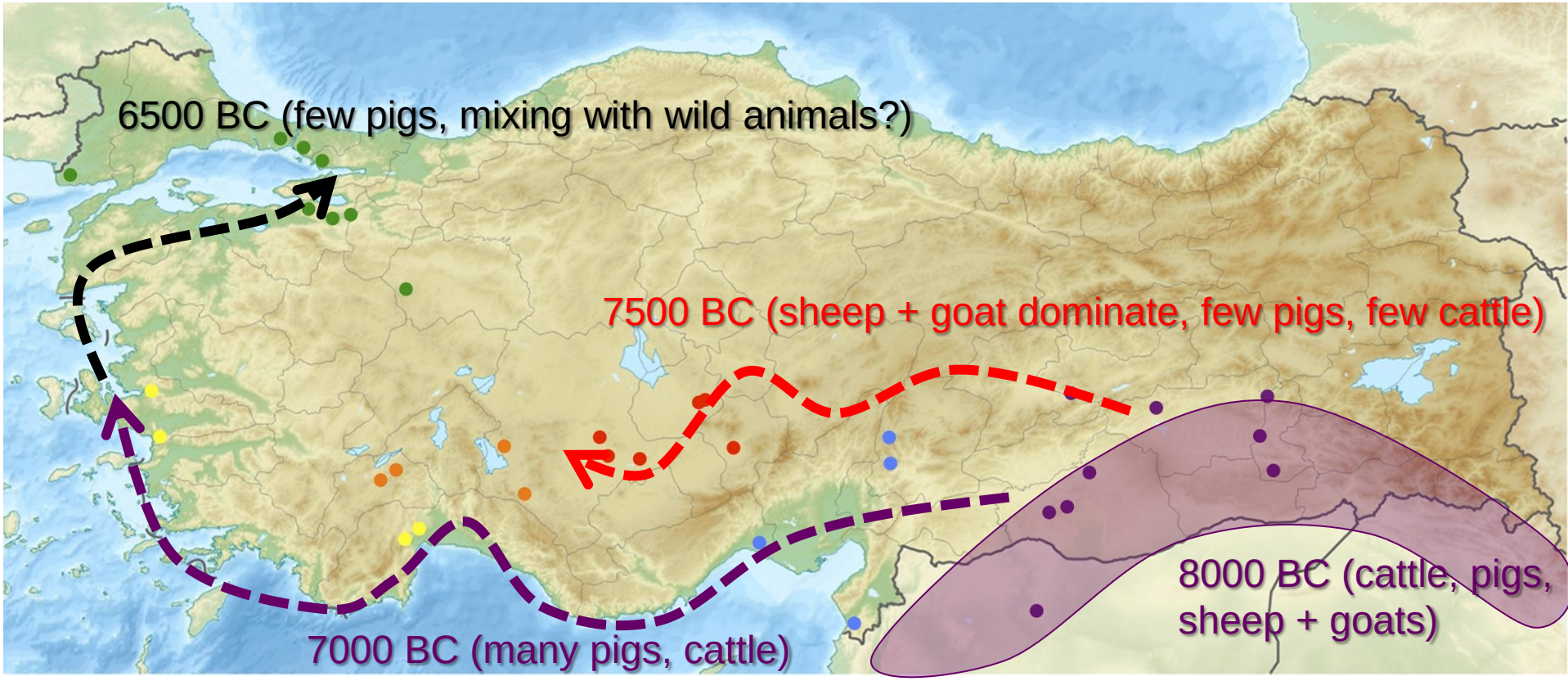
Page 1 of 1074, sorted by Interest score (desc)

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

<1% 19.3%

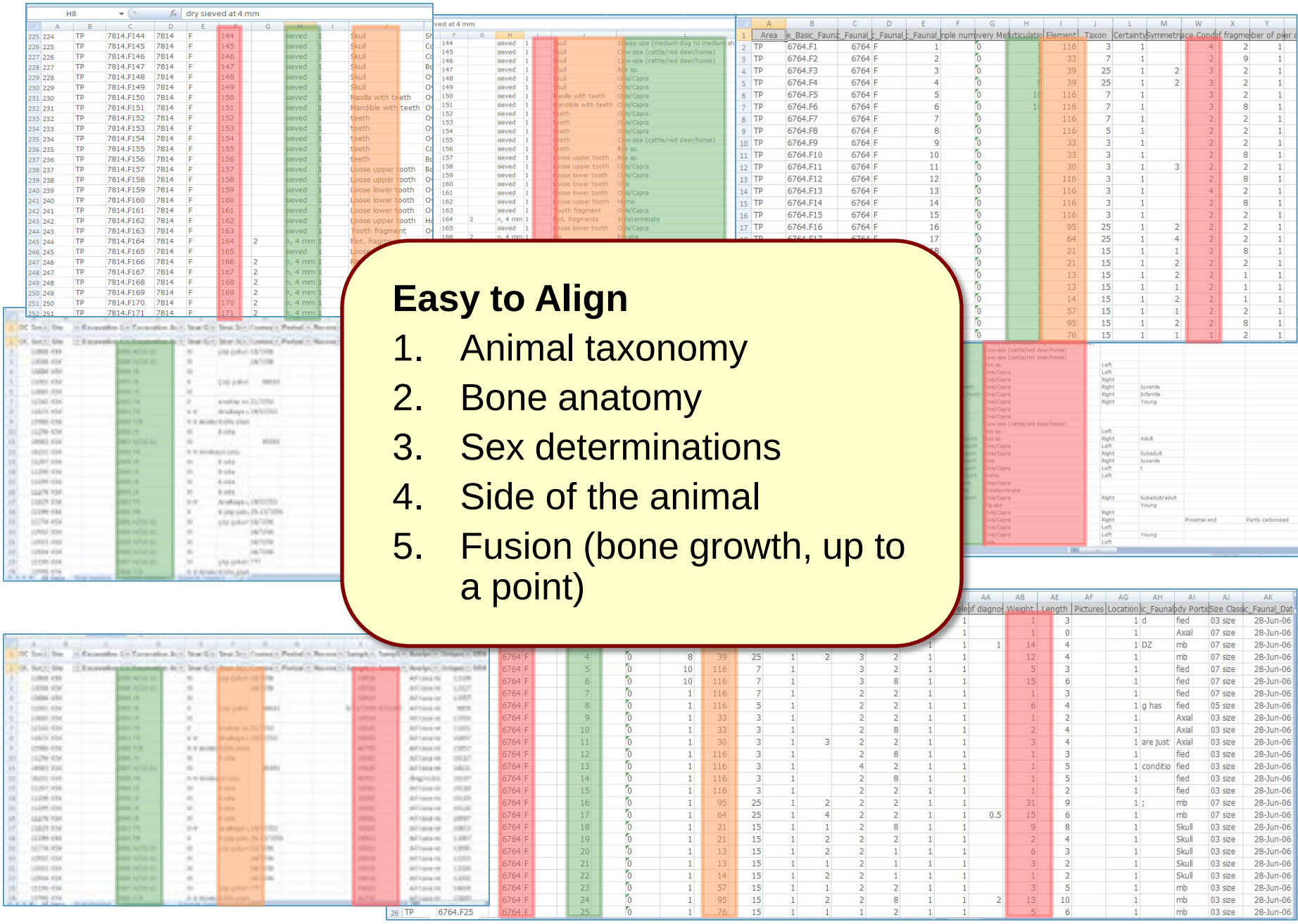
Map view: Percent 'Suidae' of 'All taxa', Swtich view to: Raw Count of 'Suidae'





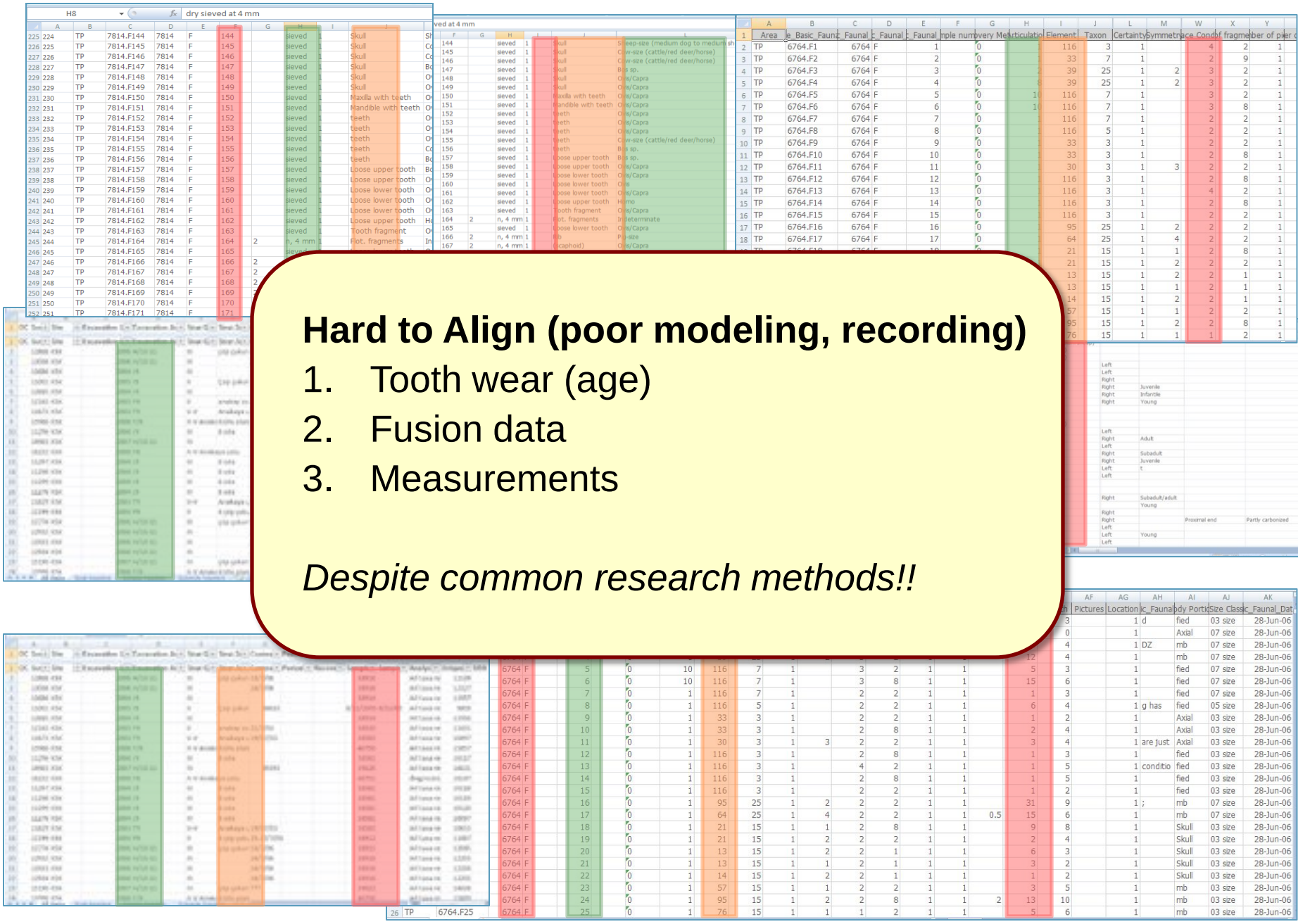
- *Not* a neat model of progress to adopt a more productive economy. Very different, sometimes piecemeal adoption in different regions.

- Separate coastal and inland routes for the spread of domestic animals, over a 1000-year time period.



Easy to Align

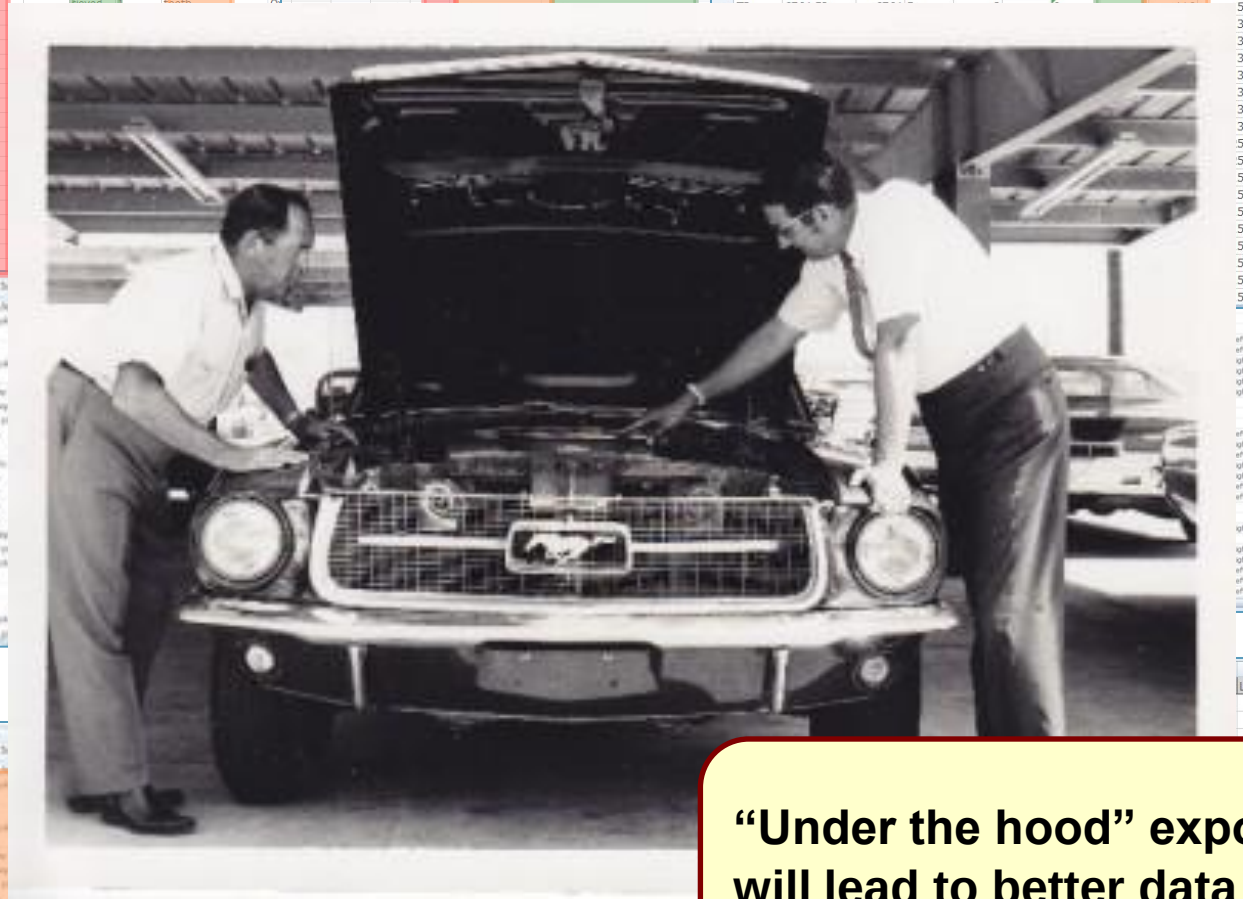
1. Animal taxonomy
2. Bone anatomy
3. Sex determinations
4. Side of the animal
5. Fusion (bone growth, up to a point)



Hard to Align (poor modeling, recording)

1. Tooth wear (age)
2. Fusion data
3. Measurements

Despite common research methods!!

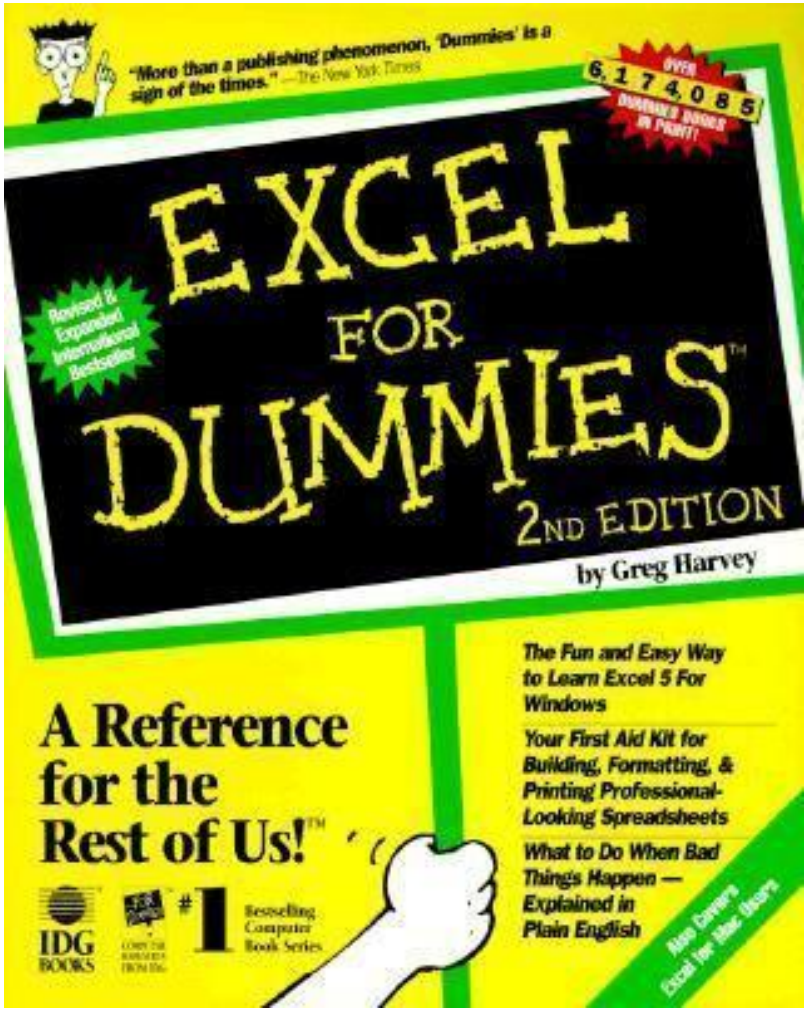


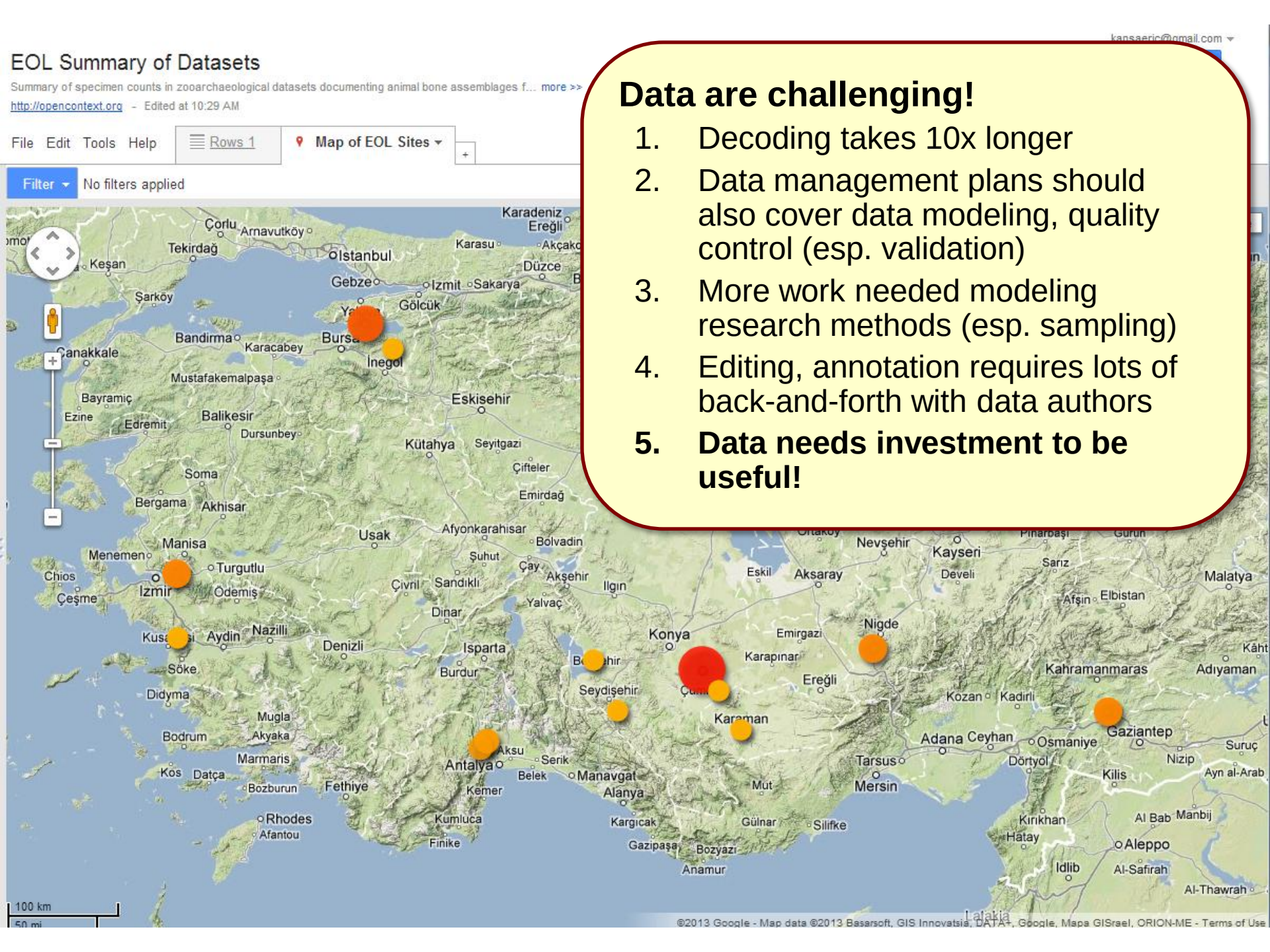
“Under the hood” exposure will lead to better data documentation practices?

Nobody expected their data to see wider scrutiny either..

Professional expectations for data reuse

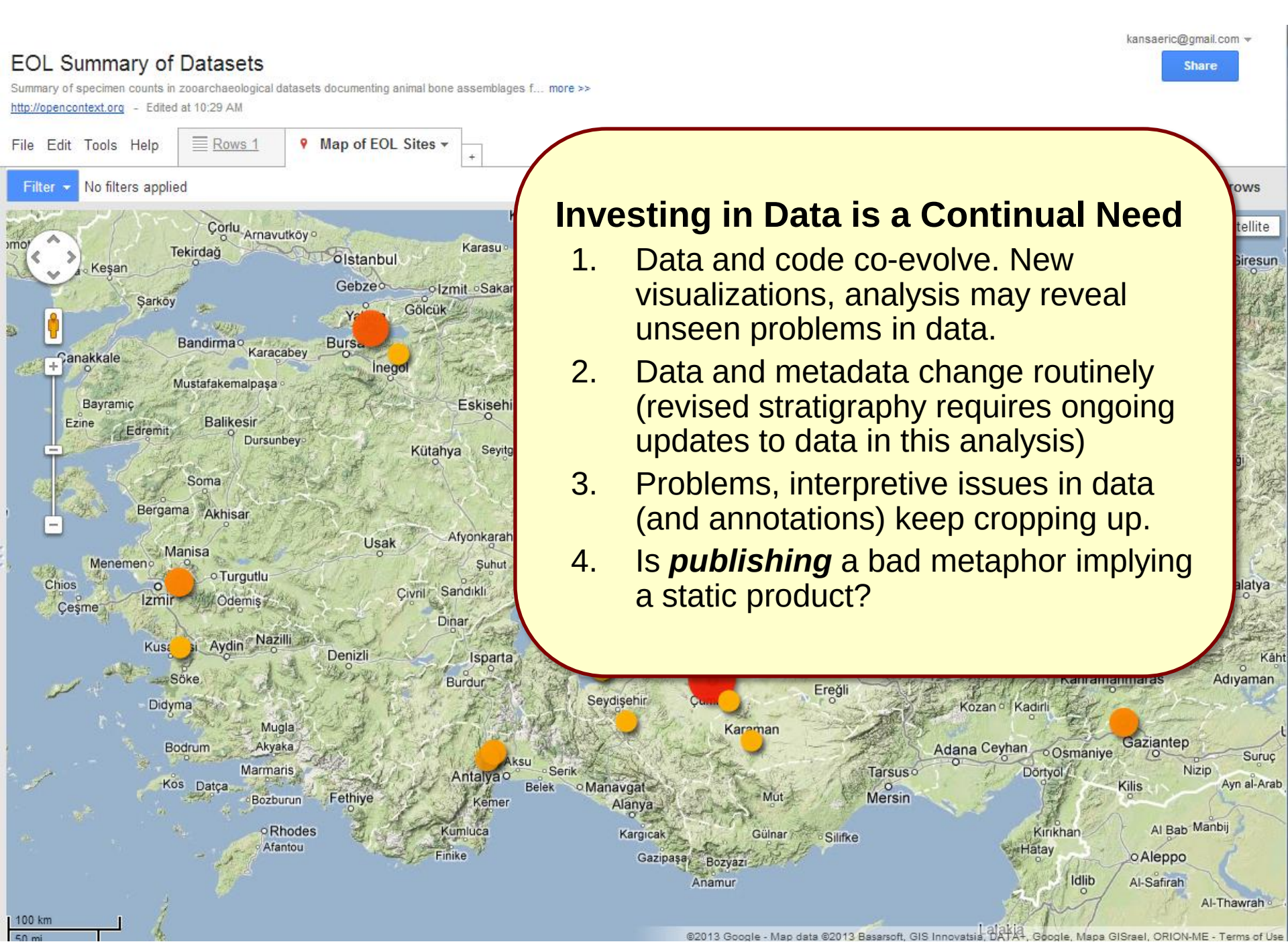
1. Need better data modeling (than feasible with, cough, Excel)
2. Data validation, normalization
3. Requires training & incentives for researchers to care more about quality of their data!




EOL Summary of Datasets
Summary of specimen counts in zooarchaeological datasets documenting animal bone assemblages f... more >>
http://opencontext.org - Edited at 10:29 AM
File Edit Tools Help
Rows 1
Map of EOL Sites
Filter
No filters applied
Data are challenging!
1. Decoding takes 10x longer
2. Data management plans should also cover data modeling, quality control (esp. validation)
3. More work needed modeling research methods (esp. sampling)
4. Editing, annotation requires lots of back-and-forth with data authors
5. Data needs investment to be useful!
Çorlu
Arnavutköy
Karadeniz Ereğli
Tekirdağ
Istanbul
Karasu
Keşan
Düzce
Gebze
İzmit
Sakarya
Şarköy
Gölcük
Bandırma
Karacabey
Bursa
İnegöl
Çanakkale
Mustafakemalpaşa
Bayramiç
Eskisehir
Ezine
Edremit
Balikesir
Dursunbey
Kütahya
Seyitgazi
Çifteler
Soma
Emirdağ
Bergama
Akhisar
Afyonkarahisar
Usak
Bolvadin
Manisa
Menemen
Şuhut
Çay
Turgutlu
Akşehir
Chios
Çeşme
İzmir
Çivril
Sandıklı
Ilgın
Ödemiş
Yalvaç
Dinar
Aydin
Nazilli
Denizli
Isparta
Burdur
Söke
Didyma
Seydişehir
Mugla
Akyaka
Bodrum
Marmaris
Kos
Datça
Bozburun
Fethiye
Antalya
Aksu
Serik
Belek
Manavgat
Kemer
Alanya
Rhodes
Afantou
Kumluca
Finike
Kargıcak
Gazipaşa
Bozyazı
Anamur
Gülnar
Silifke
Mut
Konya
Karapınar
Emirgazi
Karaman
Ereğli
Nevşehir
Kayseri
Eskil
Aksaray
Develi
Sarız
Nigde
Afşin
Elbistan
Malatya
Kahramanmaras
Adıyaman
Kozan
Kadirli
Gaziantep
Adana Ceyhan
Osmaniye
Dörtyol
Tarsus
Mersin
Nizip
Suruç
Kilis
Ayn al-Arab
Kırıkhan
Hatay
Al Bab
Manbij
Aleppo
Idlib
Al-Safirah
Al-Thawrah
Lataki
100 km
50 mi
©2013 Google - Map data ©2013 Basarsoft, GIS Innovatsia, DATA+, Google, Mapa GISrael, ORION-ME - Terms of Use

Challenges in Reusing Data

1. Background
2. Data publishing workflow
3. Data curation and dynamism


kansaeric@gmail.com
Share
EOL Summary of Datasets
Summary of specimen counts in zooarchaeological datasets documenting animal bone assemblages f... more >>
http://opencontext.org - Edited at 10:29 AM
File Edit Tools Help
Rows 1
Map of EOL Sites
Filter
No filters applied
Investing in Data is a Continual Need
1. Data and code co-evolve. New visualizations, analysis may reveal unseen problems in data.
2. Data and metadata change routinely (revised stratigraphy requires ongoing updates to data in this analysis)
3. Problems, interpretive issues in data (and annotations) keep cropping up.
4. Is publishing a bad metaphor implying a static product?
Çorlu
Arnavutköy
Tekirdağ
Istanbul
Karasu
Keşan
Gebze
İzmit
Şarköy
Gölcük
Bandırma
Karacabey
Bursa
İnegöl
Çanakkale
Mustafakemalpaşa
Bayramiç
Ezine
Edremit
Balikesir
Dursunbey
Eskisehi
Kütahya
Seyitg
Soma
Bergama
Akhisar
Usak
Afyonkarah
Manisa
Menemen
Şuhut
Turgutlu
Chios
Çeşme
İzmir
Çivril
Sandıklı
Ödemiş
Dinar
Kusa
Aydın
Nazilli
Denizli
Isparta
Söke
Burdur
Didyma
Seydişehir
Ereğli
Kozan
Kadirli
Karaman
Mugla
Bodrum
Akyaka
Adana Ceyhan
Osmaniye
Gaziantep
Marmaris
Aksu
Serik
Tarsus
Dörtyol
Nizip
Kos
Datça
Antalya
Belek
Manavgat
Mersin
Kilis
Bozburun
Fethiye
Kemer
Alanya
Mut
Rhodes
Afantou
Kumluca
Kargıcak
Gülnar
Silifke
Kırıkhan
Al Bab
Manbij
Finike
Gazipaşa
Bozyazı
Hatay
Aleppo
Anamur
Idlib
Al-Safirah
Al-Thawrah
100 km
50 mi
©2013 Google - Map data ©2013 Basarsoft, GIS Innovatsia, DATA+, Google, Mapa GISrael, ORION-ME - Terms of Use

ekansa / opencontext-eol-zooarch

Unwatch 1 | Star 0 | Fork 0

branch: master — opencontext-eol-zooarch / Commits

Aug 28, 2013

Corrected citations on Çatalhöyük tables ···
ekansa authored 7 days ago
8c0f8c99c2
Browse code

Aug 26, 2013

Update West Mound Chronology, fixed trench labels ···

```
This update concern fixes to the chronology of different trenches in
the West Mound of Çatalhöyük. Revised dating suggested by David Orton
via an email.
```

ekansa authored 9 days ago
7925df49d9
Browse code

Aug 25, 2013

Commit with published versions of data ···
ekansa authored 10 days ago
2b173e57f6
Browse code

Mar 06, 2013

EOL all specimen data ···
ekansa authored 6 months ago
669513f5ca
Browse code

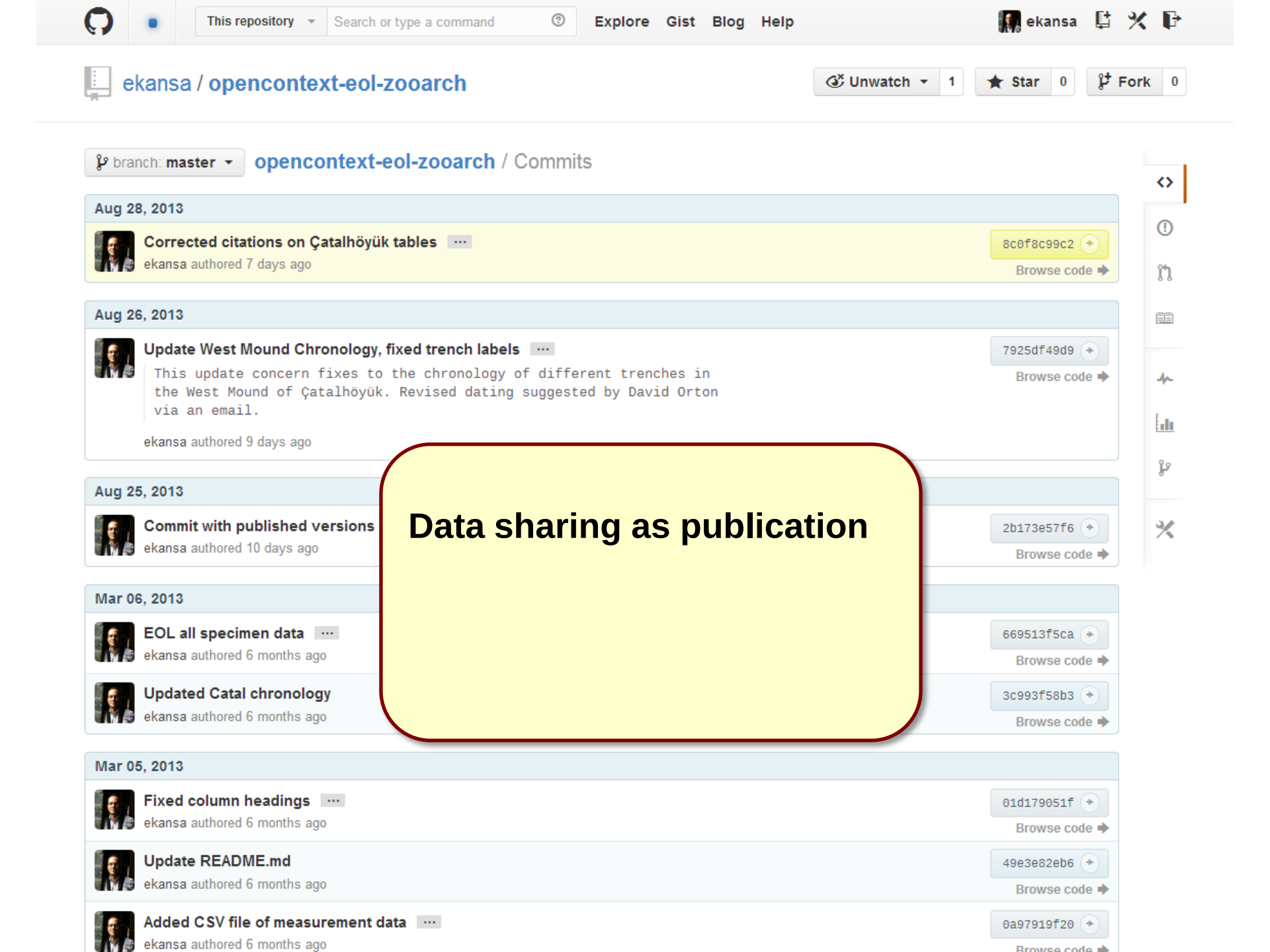
Updated Catal chronology
ekansa authored 6 months ago
3c993f58b3
Browse code

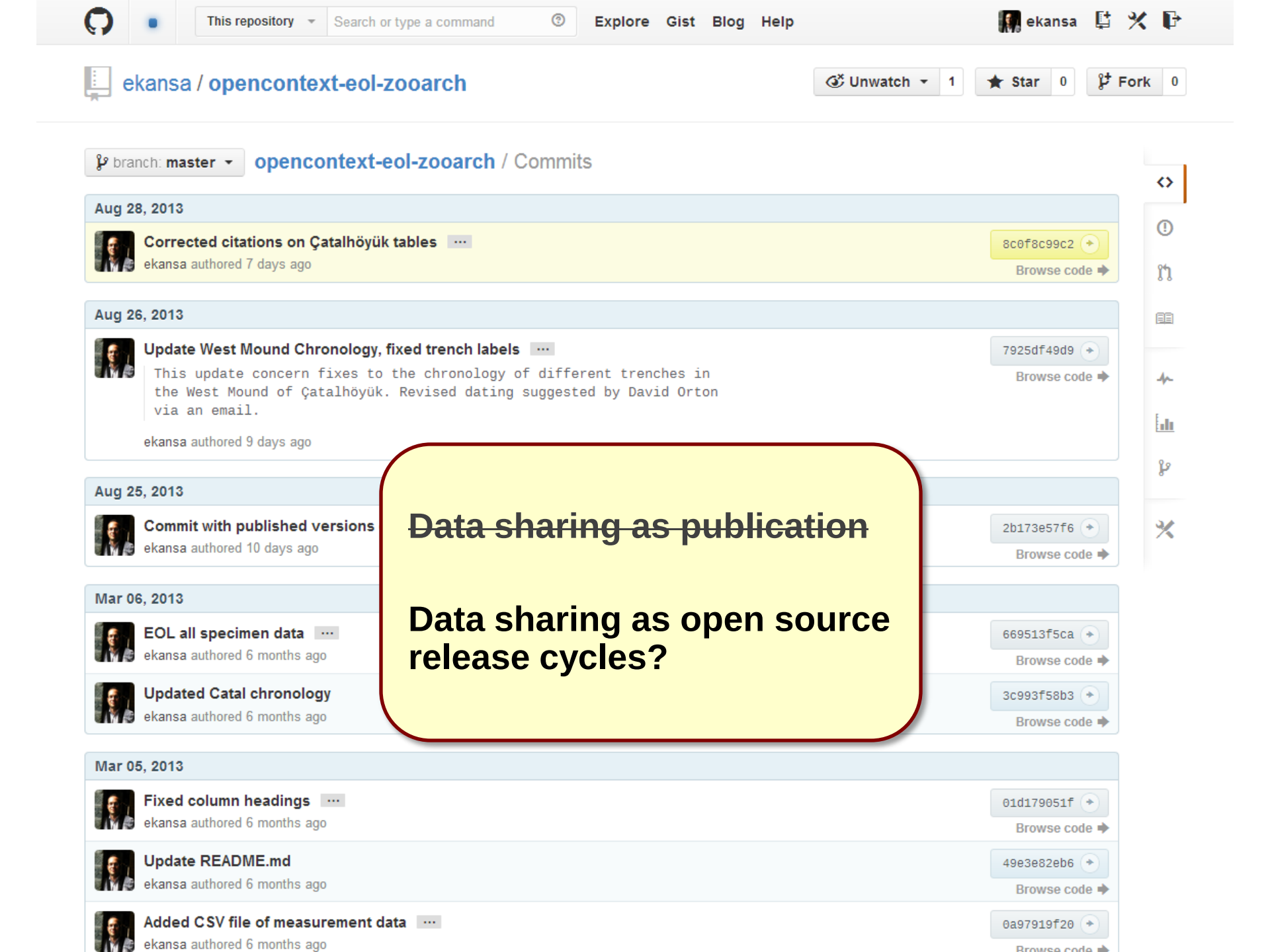
Mar 05, 2013

Fixed column headings ···
ekansa authored 6 months ago
01d179051f
Browse code

Update README.md
ekansa authored 6 months ago
49e3e82eb6
Browse code

Added CSV file of measurement data ···
ekansa authored 6 months ago
0a97919f20
Browse code


This repository
Search or type a command
Explore
Gist
Blog
Help
ekansa
ekansa / opencontext-eol-zooarch
Unwatch 1
Star 0
Fork 0
branch: master
opencontext-eol-zooarch / Commits
Aug 28, 2013
Corrected citations on Çatalhöyük tables
ekansa authored 7 days ago
8c0f8c99c2
Browse code
Aug 26, 2013
Update West Mound Chronology, fixed trench labels
This update concern fixes to the chronology of different trenches in the West Mound of Çatalhöyük. Revised dating suggested by David Orton via an email.
ekansa authored 9 days ago
7925df49d9
Browse code
Aug 25, 2013
Commit with published versions
ekansa authored 10 days ago
2b173e57f6
Browse code
Mar 06, 2013
EOL all specimen data
ekansa authored 6 months ago
669513f5ca
Browse code
Updated Catal chronology
ekansa authored 6 months ago
3c993f58b3
Browse code
Mar 05, 2013
Fixed column headings
ekansa authored 6 months ago
01d179051f
Browse code
Update README.md
ekansa authored 6 months ago
49e3e82eb6
Browse code
Added CSV file of measurement data
ekansa authored 6 months ago
0a97919f20
Browse code
Data sharing as publication


This repository
Search or type a command
Explore Gist Blog Help
ekansa
ekansa / opencontext-eol-zooarch
Unwatch 1
Star 0
Fork 0
branch: master
opencontext-eol-zooarch / Commits
Aug 28, 2013
Corrected citations on Çatalhöyük tables
ekansa authored 7 days ago
8c0f8c99c2
Browse code
Aug 26, 2013
Update West Mound Chronology, fixed trench labels
This update concern fixes to the chronology of different trenches in the West Mound of Çatalhöyük. Revised dating suggested by David Orton via an email.
ekansa authored 9 days ago
7925df49d9
Browse code
Aug 25, 2013
Commit with published versions
ekansa authored 10 days ago
2b173e57f6
Browse code
Mar 06, 2013
EOL all specimen data
ekansa authored 6 months ago
669513f5ca
Browse code
Updated Catal chronology
ekansa authored 6 months ago
3c993f58b3
Browse code
Mar 05, 2013
Fixed column headings
ekansa authored 6 months ago
01d179051f
Browse code
Update README.md
ekansa authored 6 months ago
49e3e82eb6
Browse code
Added CSV file of measurement data
ekansa authored 6 months ago
0a97919f20
Browse code
~~Data sharing as publication~~
Data sharing as open source release cycles?

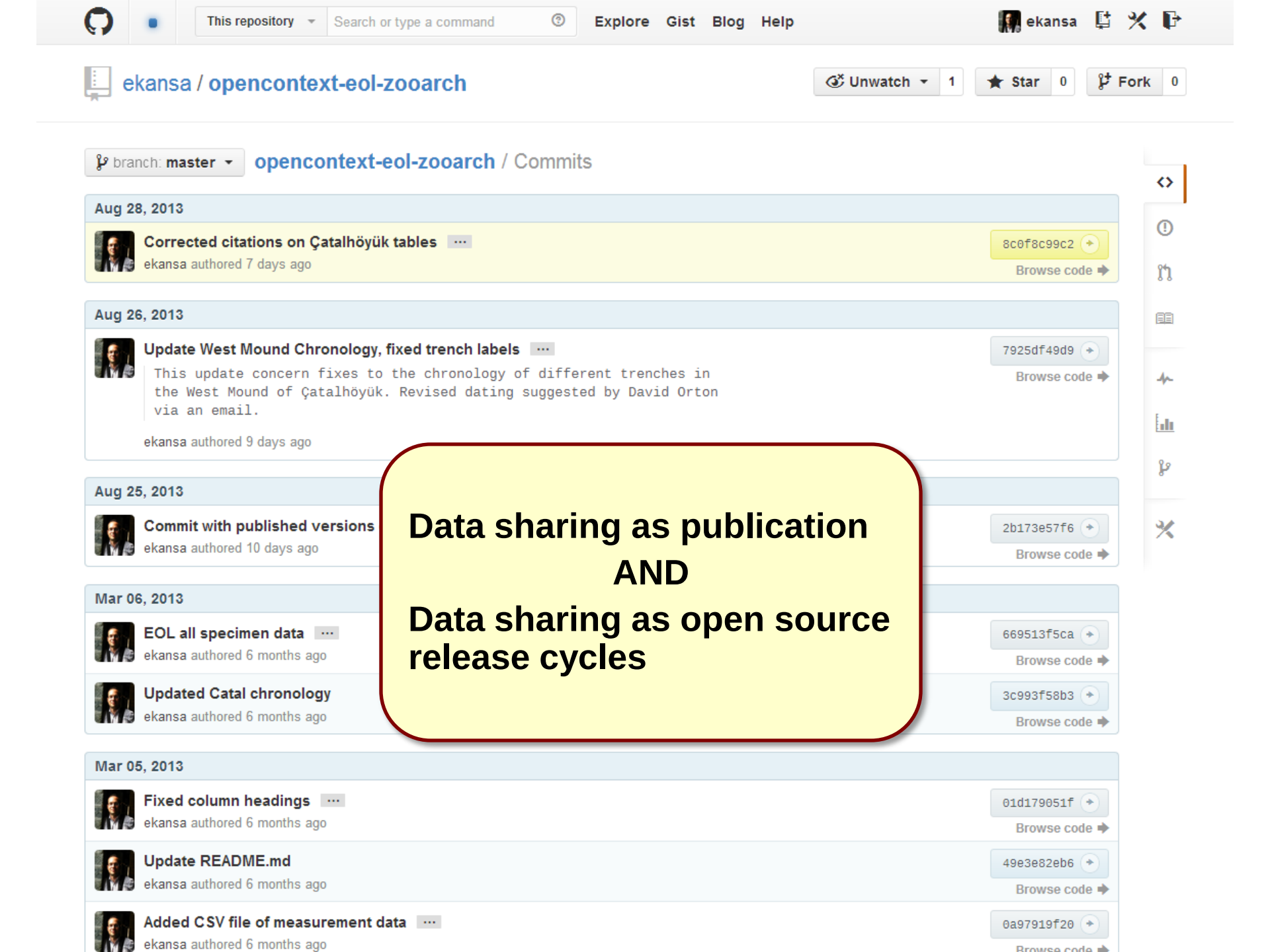

This repository
Search or type a command
Explore
Gist
Blog
Help
ekansa
ekansa / opencontext-eol-zooarch
Unwatch 1
Star 0
Fork 0
branch: master
opencontext-eol-zooarch / Commits
Aug 28, 2013
Corrected citations on Çatalhöyük tables
ekansa authored 7 days ago
8c0f8c99c2
Browse code
Aug 26, 2013
Update West Mound Chronology, fixed trench labels
This update concern fixes to the chronology of different trenches in the West Mound of Çatalhöyük. Revised dating suggested by David Orton via an email.
ekansa authored 9 days ago
7925df49d9
Browse code
Aug 25, 2013
Commit with published versions
ekansa authored 10 days ago
2b173e57f6
Browse code
Mar 06, 2013
EOL all specimen data
ekansa authored 6 months ago
669513f5ca
Browse code
Updated Catal chronology
ekansa authored 6 months ago
3c993f58b3
Browse code
Mar 05, 2013
Fixed column headings
ekansa authored 6 months ago
01d179051f
Browse code
Update README.md
ekansa authored 6 months ago
49e3e82eb6
Browse code
Added CSV file of measurement data
ekansa authored 6 months ago
0a97919f20
Browse code
Data sharing as publication
AND
Data sharing as open source release cycles

Image Credit: Copyright Newline Cinema

Final Thoughts

Data require intellectual investment, methodological and theoretical innovation.

Institutional structures poorly configured to support data powered research

New professional roles needed, but who will pay for it?

Thank you!

IDCC reviewers (excellent, very helpful comments!)