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Linking our data together: Challenges and Opportunities

Dr Holly Wright, Archaeology Data Service, University of York, UK

Novel Approaches to Digital Codicology
Tours, 10 May, 2023

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CORE TRUST SEAL

Intro to the Archaeology Data Service

Domain Specific Digital Archive
Set up in 1996
Based within the University of York

Mission: Support research, learning and teaching with free, high quality and dependable digital resources.

- Digital preservation
- Free online access to data
- Guidance and support for data creators
- Research

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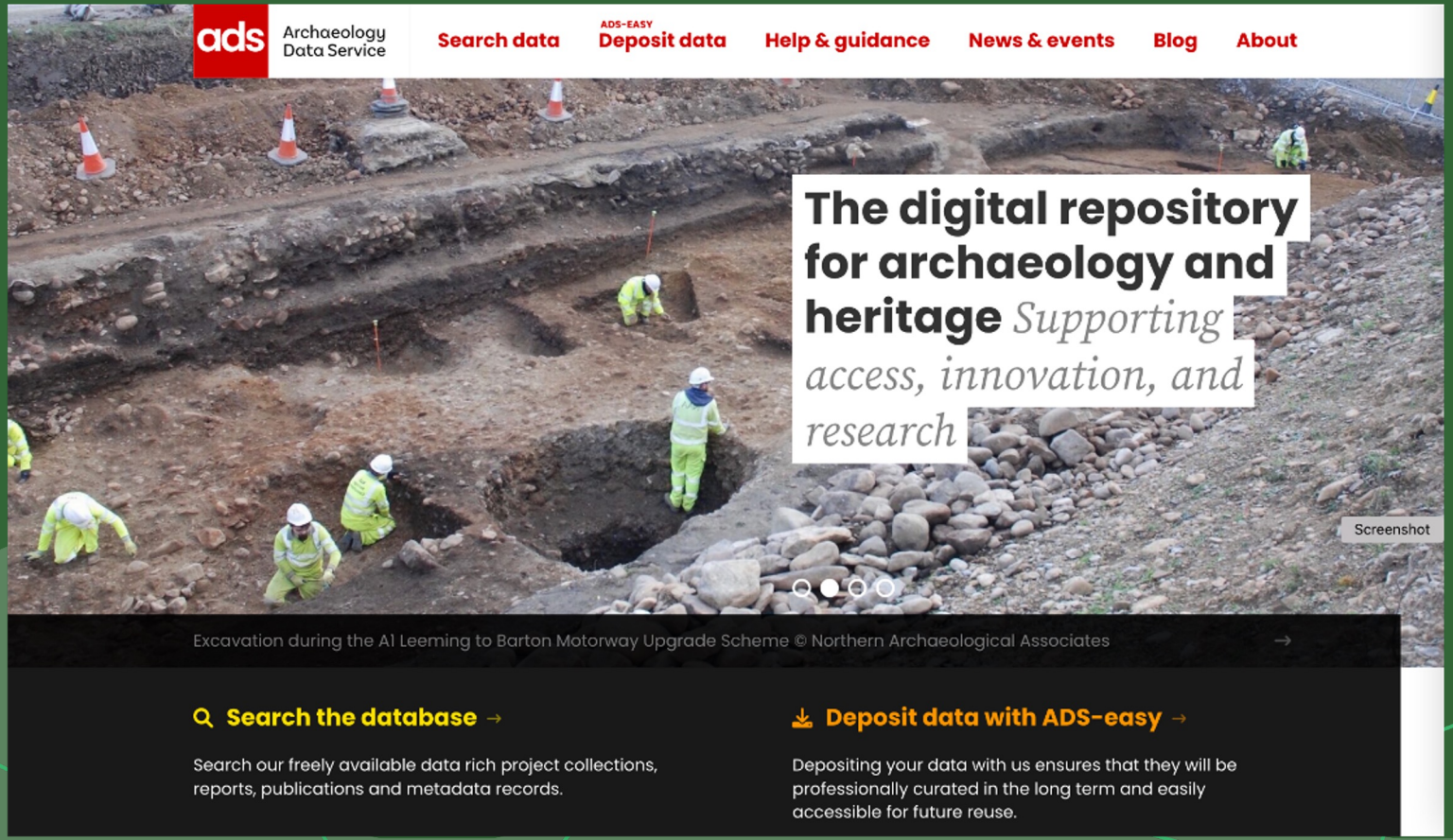

https://archaeologydataservice.ac.uk

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Why do we need a Data Service for archaeology?

- Archaeological research is often non-repeatable (e.g. excavation destroys the archaeological site) so the data becomes primary data.
- Digital data is also fragile and requires long-term stewardship.
  - **This is why people who work with archaeological data are obsessed with preservation and data persistence.**
- Archaeological data is typically very heterogeneous and difficult.
- Archaeologists will use any kind of research tool or methodology if it helps to answer their research questions, so they are digital early adopters of a huge range of data types, including scientific data (so a good SSH case study).

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What do we disseminate?

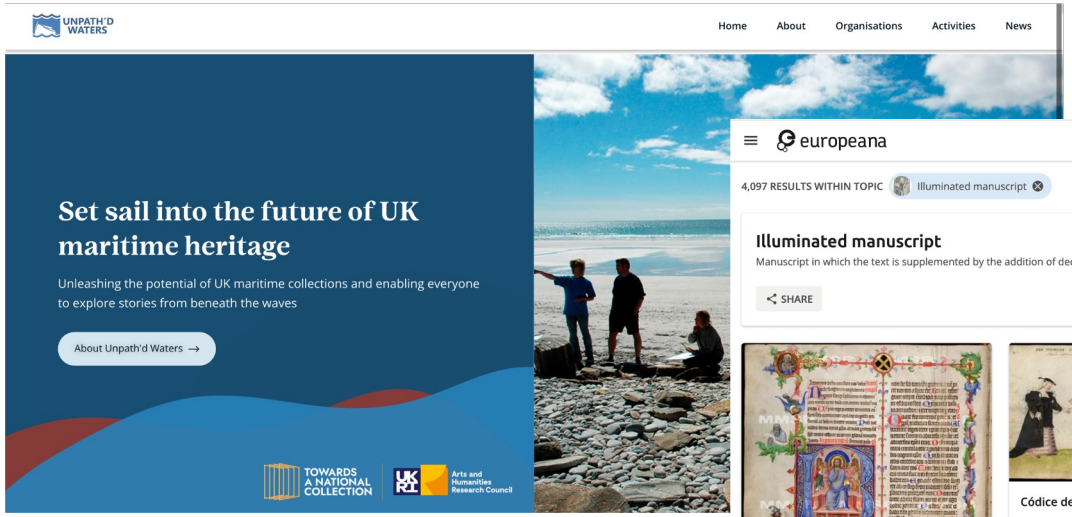
ArchSearch: Online catalogue indexing over 1.3 million metadata records including:

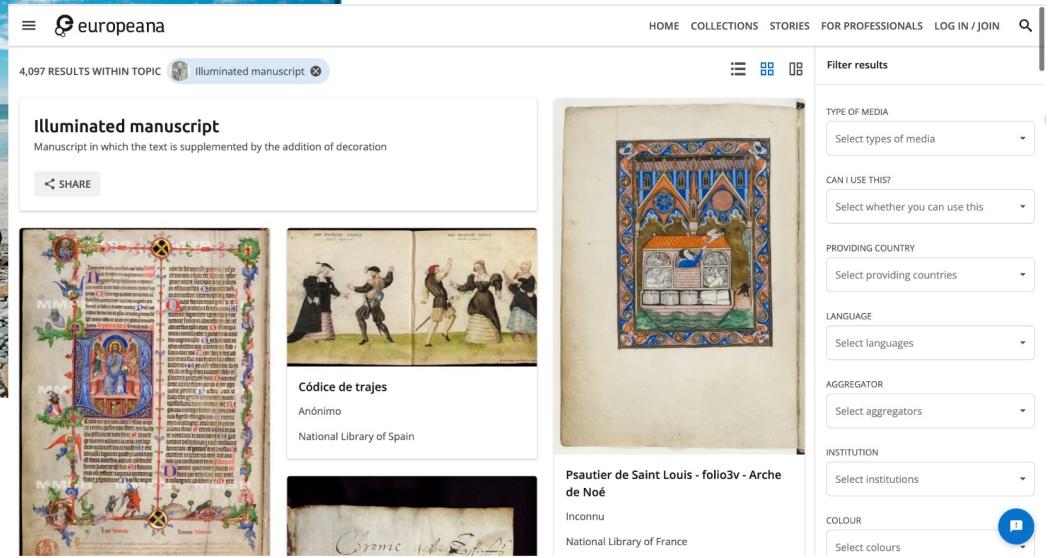
- ADS collections
  - ~3,000+ Project Archives
  - 80,000+ Unpublished Fieldwork Reports

Metadata aggregated from over 30 UK national and regional historic environment inventories.

What do we disseminate?

- Also disseminate what we aggregate to other, larger aggregators such as ***Europeana*** and ***Unpath'd Waters***





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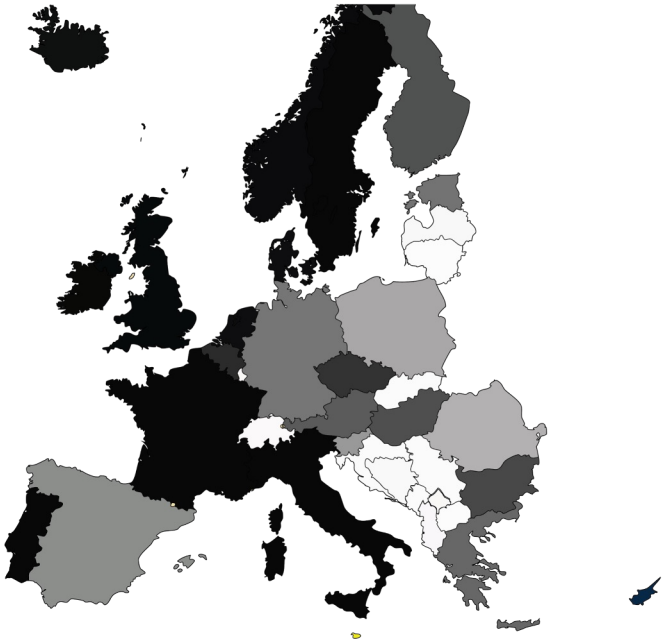
ARIADNE

ARIADNEplus

- 41 partners
- 28 countries
- Majority are archaeological partners
- Expanding participation
- Extending thematic coverage including **archaeological science**



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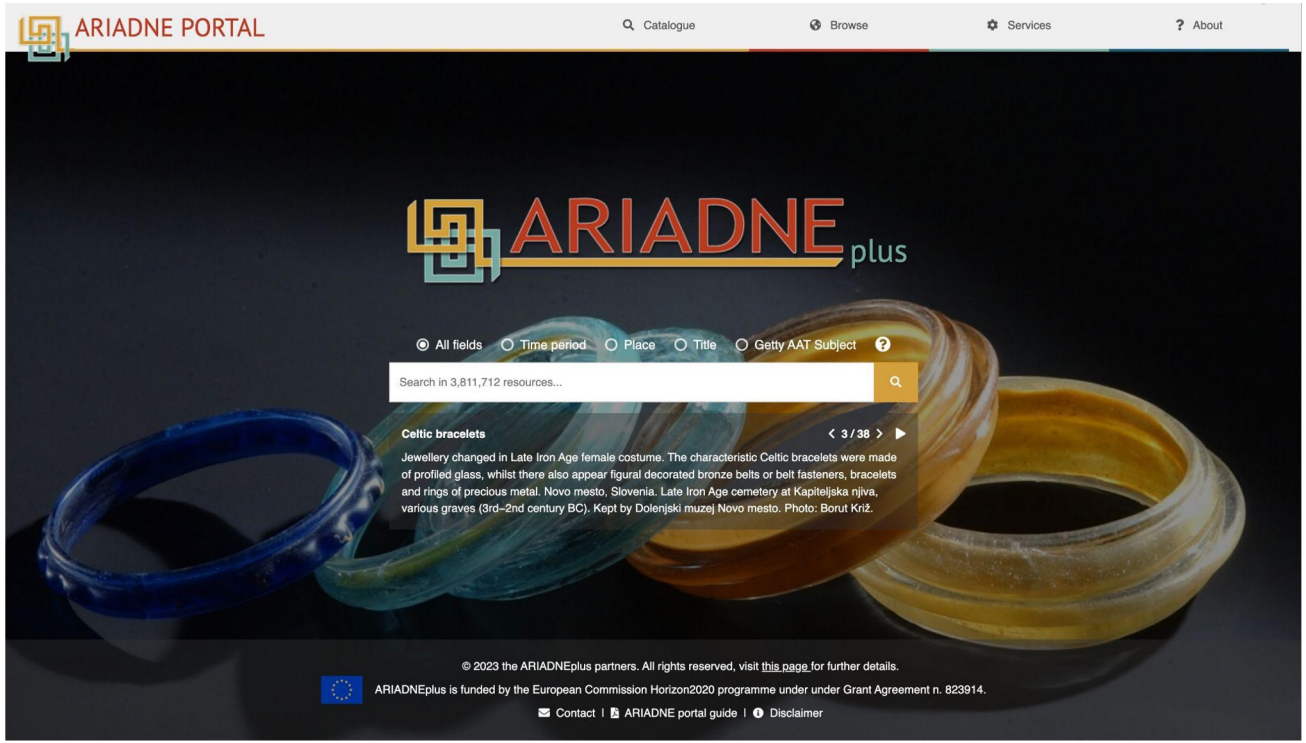

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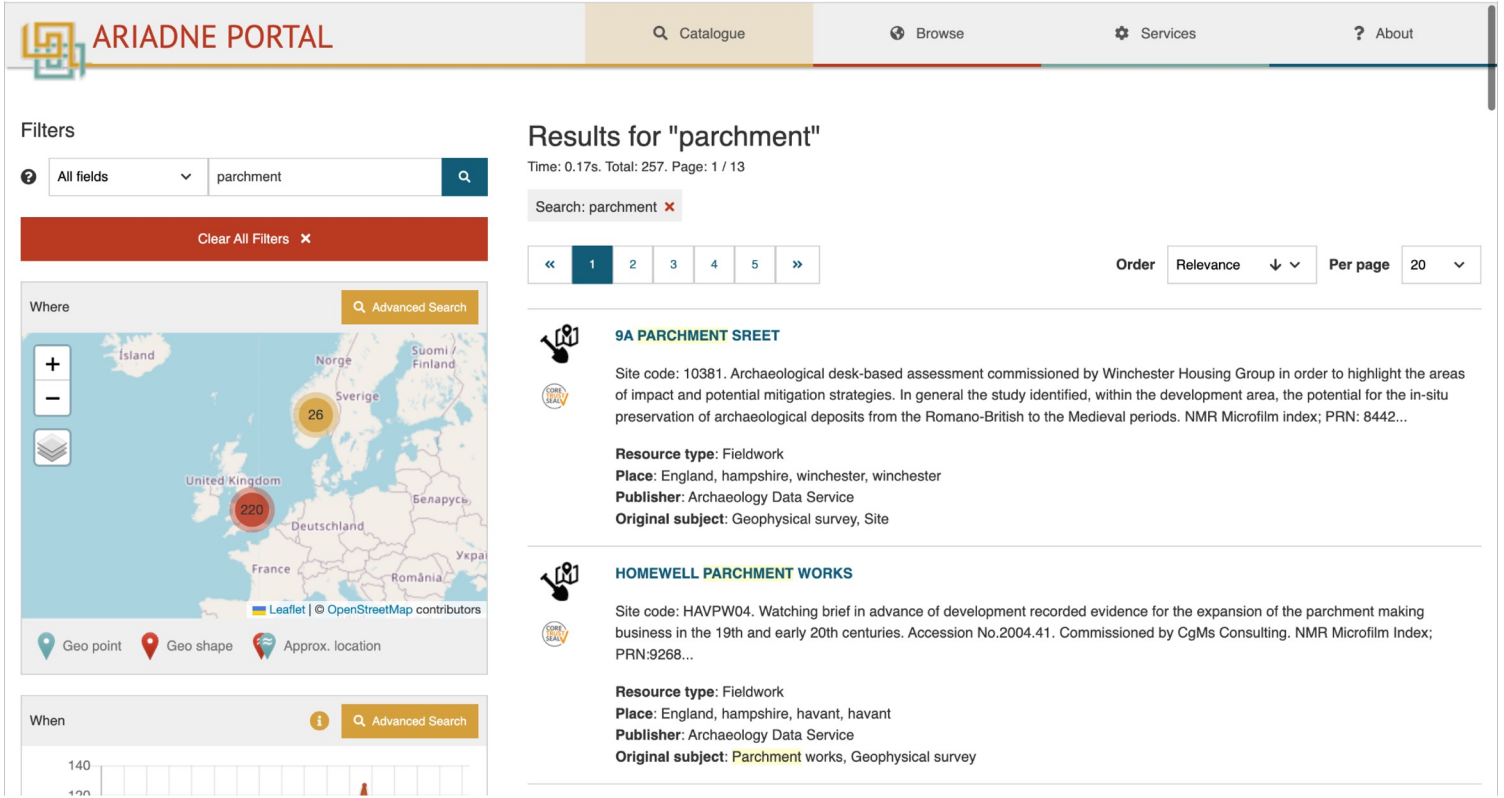

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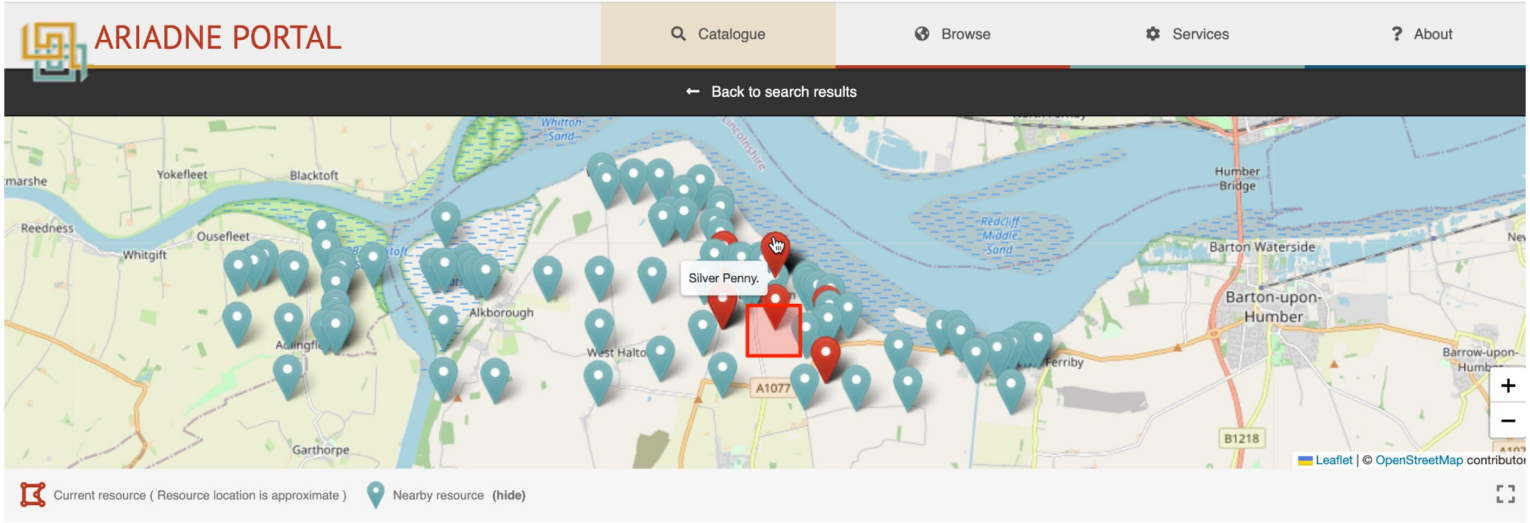

Copper alloy PARCHMENT PRICKER

Description

A cast, copper alloy possible parchment-pricker, of uncertain date but probably medieval or early post-medieval. It has a circular shaft (4.7mm in diameter) topped by a globular terminal 7.31mm in diameter. In the centre of the shaft is a pair of simple moulded collars, and at the base is a terminal which is square in section, with two collars on it. Projecting below this is a tapering, pointed circular-sectioned spike, of a smaller diameter than the shaft. This point may have been user as a stylus, or perhaps a parchment pricker. The object has a smooth dark green patina.

Resource links

View resource at provider

Json Xml Rdf Cite Report an issue

Resource is part of

Portable Antiquities Scheme Database

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Metadata

Original ID: SWYOR-117BC7

Landing page: https://finds.org.uk/database/artefacts/record/id/540988

Language: English

Resource type: Artefact

Subject - AAT: drawing instruments (en)

Subject - Original: Parchment pricker

Dating: Unknown: 43 to 1600

Place: Winteringham, north lincolnshire, north lincolnshire

Type: Dataset (Provided record)

Publisher: British Museum

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Metadata

Original ID: SWYOR-

Landing page: https:/

Language: English

Resource type: Artefa

Subject - AAT:

Subject - Original: Pa

Dating: Unknown: 43 to 1600

Place: Winteringham, north lincolnshire, north lincolnshire

Type: Dataset (Provided record)

Publisher: British Museum

Responsible person and organisations

Creator: Portable Antiquities Scheme

Contributor: Portable Antiquities Scheme

Owner: Portable Antiquities Scheme

Responsible: Portable Antiquities Scheme

Licence information

Access Rights: CC-BY

ads Archaeology Data Service

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Thematically similar

Thematically similar resources based on terms in common of:

Subject & Time period

- Lead Alloy .
- Lead Alloy WEIGHT
- Lead Alloy WEIGHT
- Lead Alloy CASTING WASTE
- Ceramic ARCHITECTURAL FRAGMENT
- Copper alloy UNIDENTIFIED OBJECT
- Copper alloy NAIL

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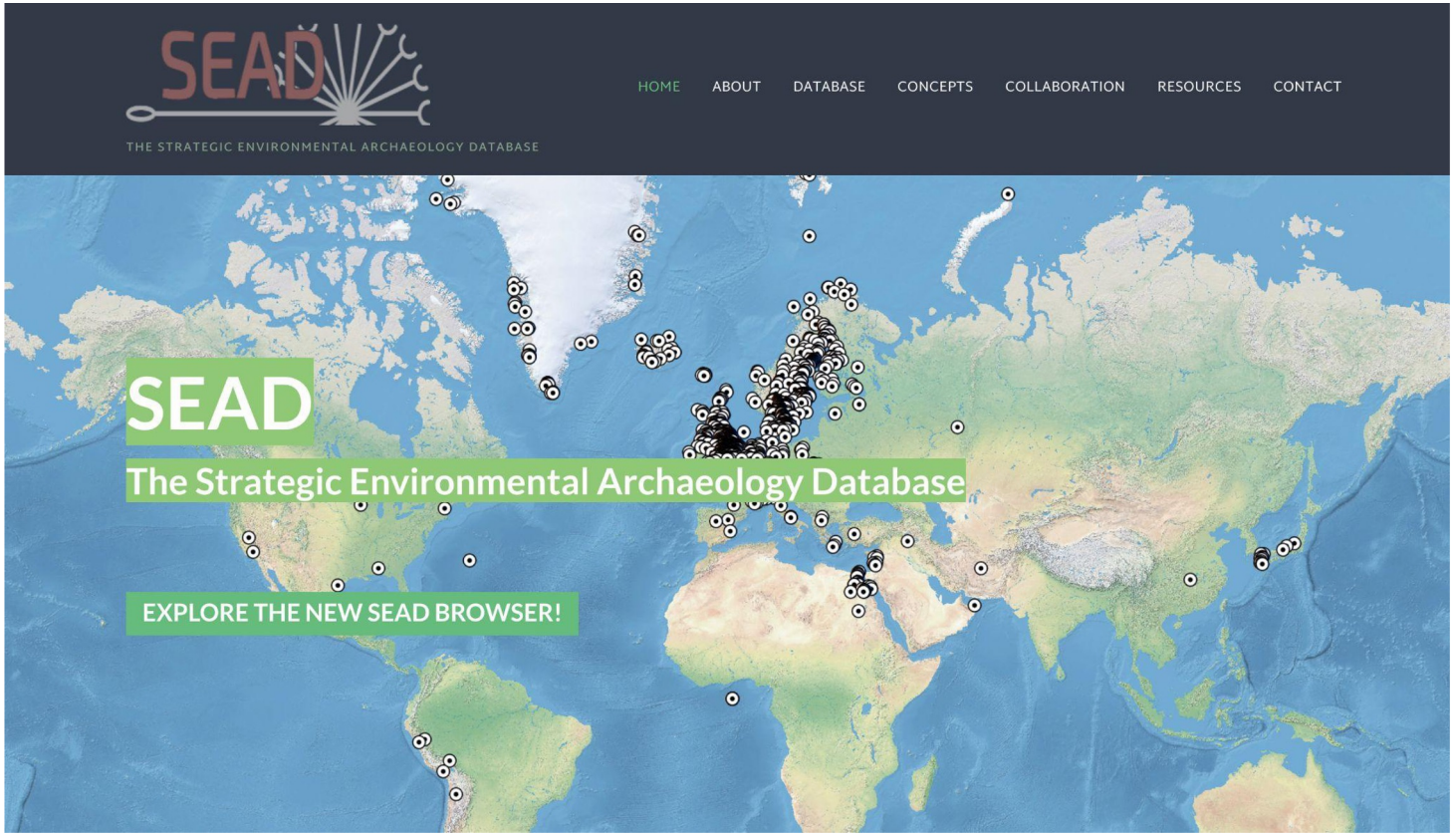

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SEAD – Strategic Environmental Archaeology Database

- SEAD is a national research infrastructure for archaeology and an international standard database for environmental archaeology data, developed and managed at the Environmental Archaeology Lab (MAL), in collaboration with HUMlab at Umeå University, Sweden.
- SEAD allows the online storage, extraction, analysis and visualisation of data on past climates, environments and human impacts, and forms part of an international network of research infrastructure for environmental archaeology and Quaternary palaeoecology.

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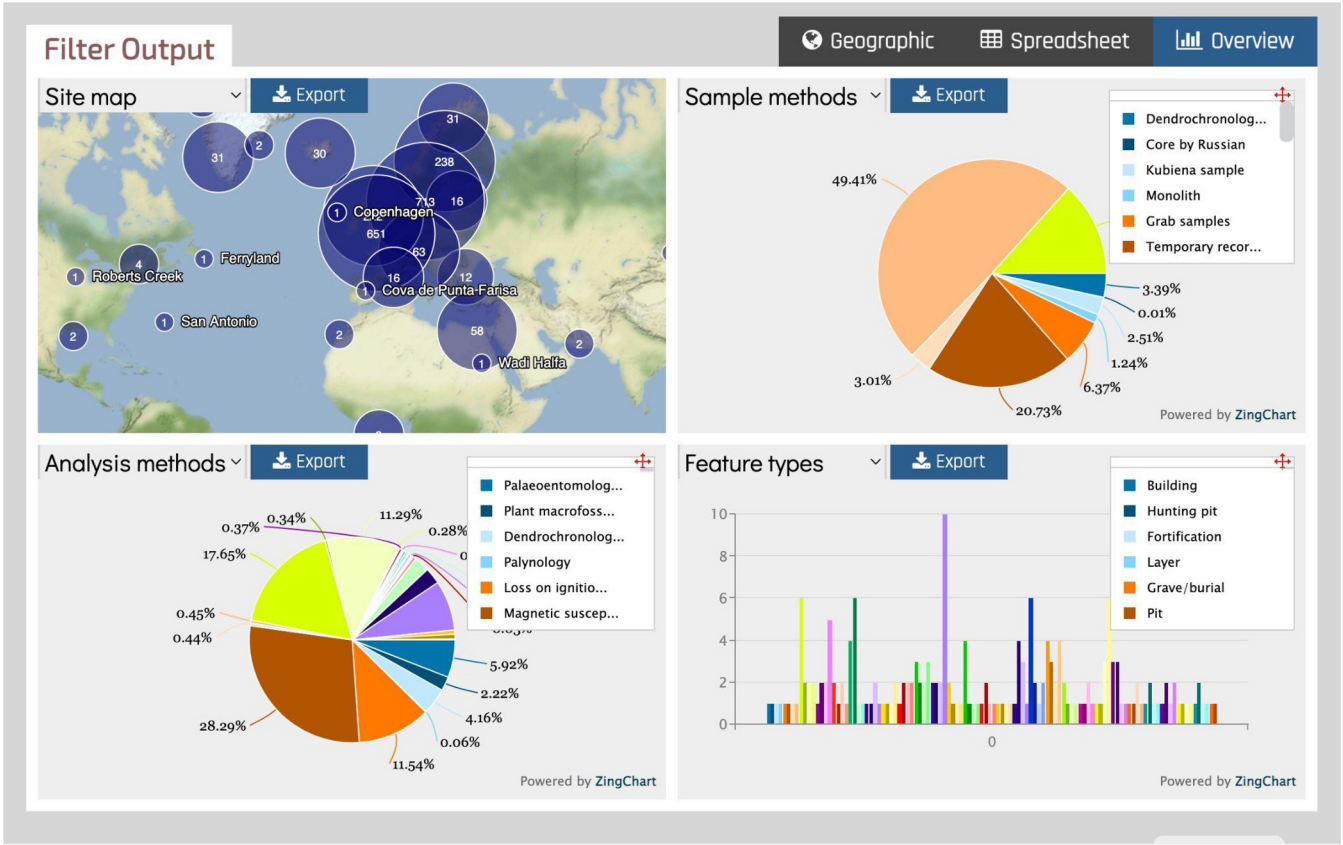

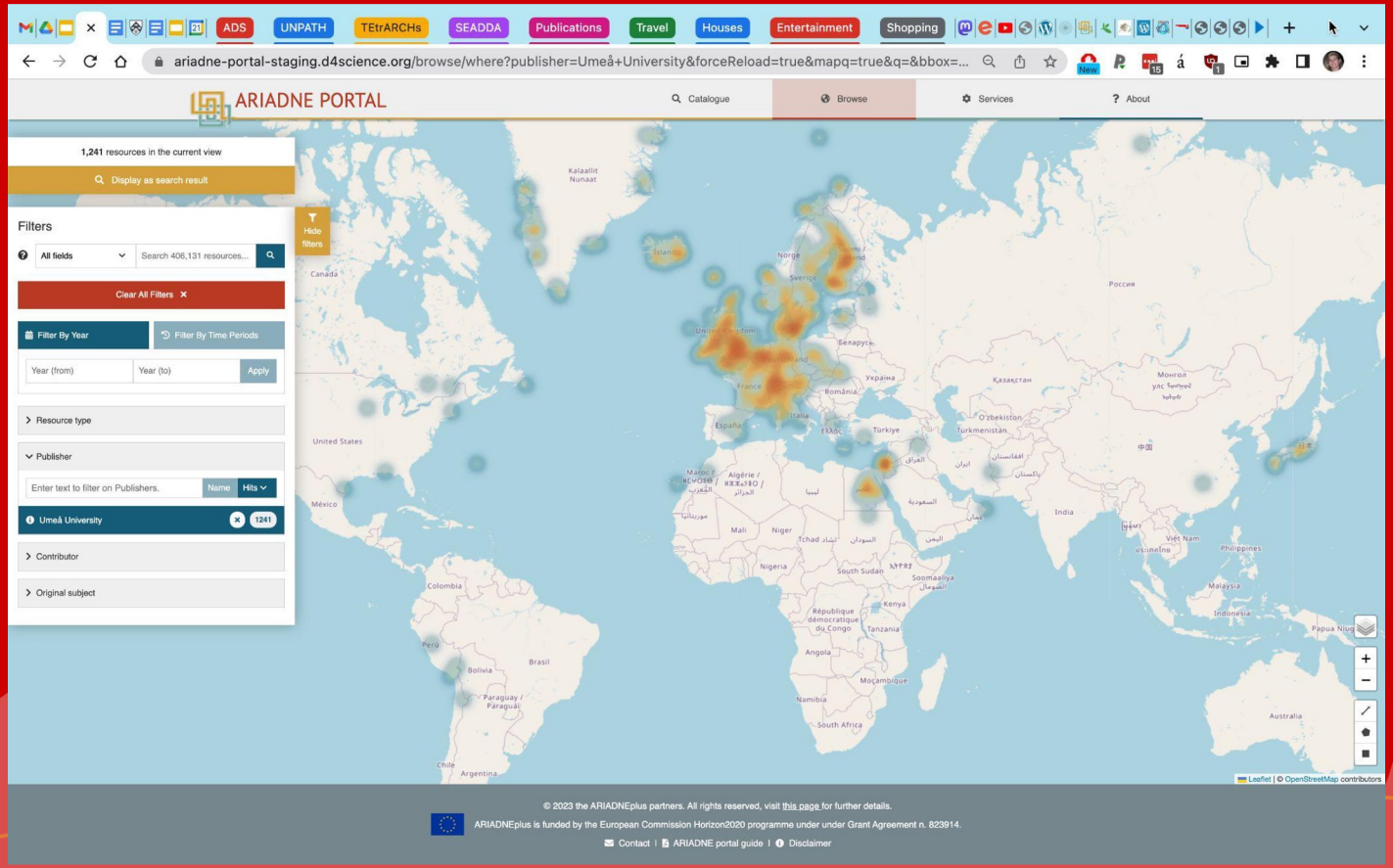

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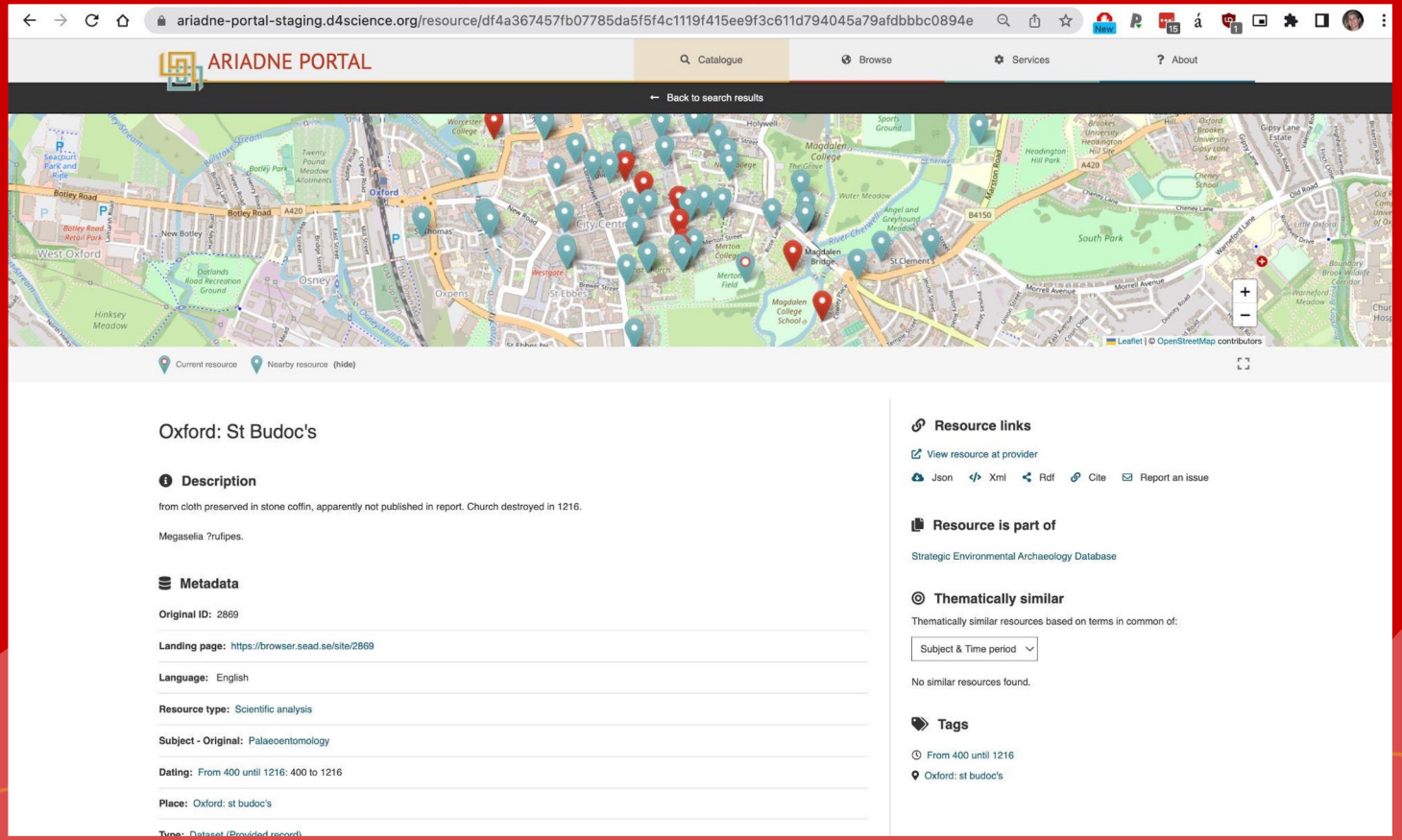

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SEAD
Strategic Environmental Archaeology Database

Archaeological site datasheet

Oxford: St Budoc's

Overview

Samples taken (groupings) | Display options | Export

Sample group id	Group name	Sampling context	Sampling method	Analysis methods
7686	Oxford St Budoc	Archaeological site	Temporary record	ArchPer HistCal Fossil insects

Analyses

Archaeological period (unspecified)

Archaeological period (unspecified) | Export

Sample	Age name	Age location	Age
S	Medieval	Europe	1550 - 400 BP

Historical Records

Historical Records | Export

Sample	Age name	Age location	Age
S	CAL_-1216_AD	No data	< 734 BP

Palaeoentomology

COUN000920 (35149) | Display options | Export

Site identifier

2869

Location

England, Oxfordshire

Export

Export all site data

Description

from cloth preserved in stone coffin, apparently not published in report. Church destroyed in 1216. Megaselia ?rufipes.

Dataset references

Site references

Skidmore, P. (1996), *A Dipterological Perspective on the Holocene History of the North Atlantic Area. Unpubl. Ph.D., University of Sheffield.*, 1996,

Hassall, T. G. (1970), *St Budoc's Church. Excavations at Oxford 1969. Second Interim Report. Oxoniensia, 35, 12*, 1970,

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Other Initiatives: E-RIHS

- Represented archaeology within the European Research Infrastructure for Heritage Science (E-RIHS) Preparatory Phase for becoming a Research Infrastructure Consortium (ERIC).
- **D5.3 Data Curation Policy:** Report on data management for materials analysis, dating methods, archaeological science, biomolecular archaeology, synchrotron methods, and conservation science, amongst others.
- The report follows the Framework provided by the FAIR Principles (Findable, Accessible, Interoperable and Re-usable) but interprets them in the context of heritage science.

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Other Initiatives: DiSSCo

- The Distributed System of Scientific Collections is a new Research Infrastructure for Natural Science Collections.
- DiSSCo is working to digitally unify all European natural science assets under common access, curation, policies and practices that ensure that all the data is FAIR.
- DiSSCo represents the largest ever formal agreement between natural history museums, botanic gardens and collection-holding universities in the world.

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Other Initiatives: iSamples

- The Internet of Samples (iSamples) is working to design, and develop a service infrastructure to uniquely, identify material samples, record metadata about them, and persistently link them to other samples and derived digital content, including images, data, and publications.
- Funded by the US National Science Foundation.
- iSamples will allow scientists to track natural science samples, subsamples, associated metadata, data, and research products.

OXFORD (GIGA)n SCIENCE

GigaScience, 10, 2021, 1–5

doi: 10.1093/gigascience/giab028
Commentary

COMMENTARY

Internet of Samples (iSamples): Toward an interdisciplinary cyberinfrastructure for material samples

Neil Davies [1,2,*], John Deck [3], Eric C. Kansa [4], Sarah Whitcher Kansa [4], John Kunze [5], Christopher Meyer [6], Thomas Orrell [6], Sarah Ramdeen [7], Rebecca Snyder [6], Dave Vieglais [8], Ramona L. Walls [9] and Kerstin Lehnert [7]

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Conclusions

- We put far too little emphasis on the data and far too much on the search interface that will become obsolete
- All our time and funding goes into creating the data in the first place, and it needs to have its own long-term plan
- Data can and should be linked and shared in many directions and using many approaches. Different ‘shop windows’ can give different ways into the data
- Lots of work to do understanding heritage science workflows to link data together in ways that can be substantively reused

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Thank You!

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