

Linking our data together: Challenges and Opportunities

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Novel Approaches to Digital Codicology
Tours, 10 May, 2023



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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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**The digital repository
for archaeology and
heritage** *Supporting
access, innovation, and
research*

Screenshot

Excavation during the A1 Leeming to Barton Motorway Upgrade Scheme © Northern Archaeological Associates →

[🔍 Search the database →](#)

Search our freely available data rich project collections, reports, publications and metadata records.

[📄 Deposit data with ADS-easy →](#)

Depositing your data with us ensures that they will be professionally curated in the long term and easily accessible for future reuse.

<https://archaeologydataservice.ac.uk>

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).

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 - 80,000+ Unpublished Fieldwork Reports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.

ads ARCHAEOLOGY DATA SERVICE

ADS Main Website Help

RESET QUERY

KEYWORD SEARCH

[Download results as XML] [Download results as CSV]

1407814 results (page 1 OF 28157) << 123 ... >>

BROWSER BASIC

▼ WHAT

- ▶ Event 179573
- ▶ Evidence 261855
- ▶ Maritime 69977
- ▶ Monument Types 1267164
- ▶ Object Types 210118

▶ WHERE

▼ WHEN

- ▶ Early Prehistoric 15622
- ▶ Later Prehistoric 107350
- ▶ Roman 81294
- ▶ Early Medieval 24538
- ▶ Medieval 165199
- ▶ Post Medieval 388441
- ▶ Modern 85831

▶ RESOURCE

ADVANCED MAP

A LOOK IN THE REAR VIEW MIRROR
Historic England NRHE Excavation Index for England
 Report examining the developing relationship between modern road construction, particularly motorways, and the development of archaeology, primarily in the period since the Second World War.
 WILTSHIRE

ABBEY FIELDS ABBEYMEAD
Historic England NRHE Excavation Index for England
 Followed by excavation 14/86 (Event 652905). Observation of sewer trench.
 GLOUCESTERSHIRE

AINSBROOK SITE
Historic England NRHE Excavation Index for England
 Evaluation and excavation of the site of a Viking period hoard recorded a disturbed burial with grave goods and a large Bronze Age enclosure. Metal detectorists had previously removed '7000' artefacts from the site, the location of which is kept secret. County location data applied to aid retrieval 2018.
 NORTH YORKSHIRE

What do we disseminate?

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

UNPATH'D WATERS

Home About Organisations Activities News

Set sail into the future of UK maritime heritage

Unleashing the potential of UK maritime collections and enabling everyone to explore stories from beneath the waves

About Unpath'd Waters →

TOWARDS A NATIONAL COLLECTION

UK Arts and Humanities Research Council

4,097 RESULTS WITHIN TOPIC **Illuminated manuscript**

Illuminated manuscript
Manuscript in which the text is supplemented by the addition of decoration

SHARE

Códice de trajes
Anónimo
National Library of Spain

Psautier de Saint Louis - folio3v - Arche de Noé
Inconnu
National Library of France

Chronique de Saint Louis

HOME COLLECTIONS STORIES FOR PROFESSIONALS LOG IN / JOIN

Filter results

TYPE OF MEDIA
Select types of media

CAN I USE THIS?
Select whether you can use this

PROVIDING COUNTRY
Select providing countries

LANGUAGE
Select languages

AGGREGATOR
Select aggregators

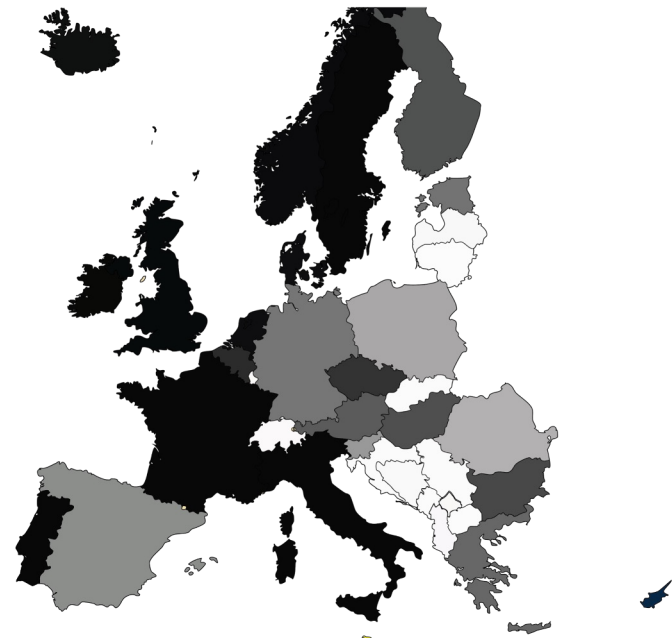
INSTITUTION
Select institutions

COLOUR
Select colours

ARIADNEplus

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

<https://ariadne-infrastructure.eu/>



The screenshot shows the ARIADNE PORTAL website interface. At the top, there is a navigation bar with 'ARIADNE PORTAL' on the left and 'Catalogue', 'Browse', 'Services', and 'About' on the right. The main content area features a large background image of several Celtic bracelets in various colors (blue, green, yellow, orange). Overlaid on this image is the 'ARIADNE plus' logo. Below the logo, there is a search bar with the text 'Search in 3,811,712 resources...'. Above the search bar, there are filter options: 'All fields', 'Time period', 'Place', 'Title', and 'Getty AAT Subject'. Below the search bar, the search results for 'Celtic bracelets' are displayed, showing a page number '3 / 38' and a brief description: 'Jewellery changed in Late Iron Age female costume. The characteristic Celtic bracelets were made of profiled glass, whilst there also appear figural decorated bronze belts or belt fasteners, bracelets and rings of precious metal. Novo mesto, Slovenia. Late Iron Age cemetery at Kapiteljska njiva, various graves (3rd–2nd century BC). Kept by Dolenjski muzej Novo mesto. Photo: Borut Križ.'

ARIADNE PORTAL

Catalogue Browse Services About

ARIADNE plus

All fields Time period Place Title Getty AAT Subject

Search in 3,811,712 resources...

Celtic bracelets < 3 / 38 >

Jewellery changed in Late Iron Age female costume. The characteristic Celtic bracelets were made of profiled glass, whilst there also appear figural decorated bronze belts or belt fasteners, bracelets and rings of precious metal. Novo mesto, Slovenia. Late Iron Age cemetery at Kapiteljska njiva, various graves (3rd–2nd century BC). Kept by Dolenjski muzej Novo mesto. Photo: Borut Križ.

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<https://portal.ariadne-infrastructure.eu/>



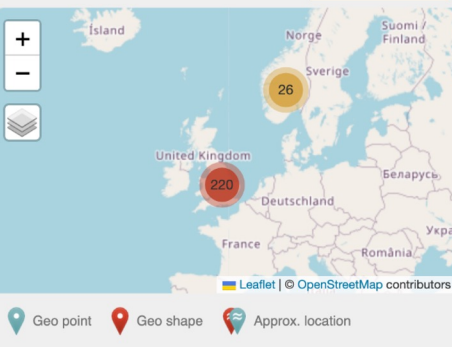
Filters

🔍 All fields 🔍

Clear All Filters ✕

Where

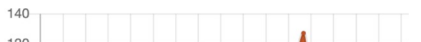
🔍 Advanced Search



When



🔍 Advanced Search



Results for "parchment"

Time: 0.17s. Total: 257. Page: 1 / 13

Search: parchment ✕

« 1 2 3 4 5 »

Order

Relevance ↓

Per page

20



9A PARCHMENT SREET



Site code: 10381. Archaeological desk-based assessment commissioned by Winchester Housing Group in order to highlight the areas of impact and potential mitigation strategies. In general the study identified, within the development area, the potential for the in-situ preservation of archaeological deposits from the Romano-British to the Medieval periods. NMR Microfilm index; PRN: 8442...

Resource type: Fieldwork

Place: England, hampshire, winchester, winchester

Publisher: Archaeology Data Service

Original subject: Geophysical survey, Site



HOMEWELL PARCHMENT WORKS



Site code: HAVPW04. Watching brief in advance of development recorded evidence for the expansion of the parchment making business in the 19th and early 20th centuries. Accession No.2004.41. Commissioned by CgMs Consulting. NMR Microfilm Index; PRN:9268...

Resource type: Fieldwork

Place: England, hampshire, havant, havant

Publisher: Archaeology Data Service

Original subject: Parchment works, Geophysical survey

ARIADNE PORTAL 🔍 Catalogue 🗺 Browse ⚙ Services 📄 About

← Back to search results

Current resource (Resource location is approximate) 📍 Nearby resource (hide)

Leaflet | © OpenStreetMap contributor

Copper alloy PARCHMENT PRICKER

i 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

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](#)

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

Metadata

Original ID: SWYOR-

Landing page: <https://>

Language: English

Resource type: Artefact

Subject - AAT:   

Subject - Original: Pa

Dating: Unknown: 43 to 1600

Place: [Winteringham, north Lincolnshire, north Lincolnshire](#)

Type: Dataset (Provided record)

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Contributor: [Portable Antiquities Scheme](#)

Owner: [Portable Antiquities Scheme](#)

Responsible: [Portable Antiquities Scheme](#)








Licence information

Access Rights: CC-BY

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](#)

Responsible person and organisations

Metadata

Original ID: SWYOR-

Landing page: <https://>

Language: English

Resource type: Artefact

Subject - AAT:   

Subject - Original: Pa

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Licence information

Access Rights: CC-BY

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
-  Ceramic ARCHITECT
-  Copper alloy UNIDEN
-  Copper alloy NAIL



The image shows a banner for the SEAD website. At the top left is the SEAD logo, which consists of the letters 'SEAD' in a bold, sans-serif font, with a stylized sunburst or fan shape behind the 'A'. Below the logo is the text 'THE STRATEGIC ENVIRONMENTAL ARCHAEOLOGY DATABASE'. To the right of the logo is a navigation menu with the following items: HOME, ABOUT, DATABASE, CONCEPTS, COLLABORATION, RESOURCES, and CONTACT. The main part of the banner is a world map with numerous small circular markers indicating archaeological sites. The markers are most densely clustered in Europe and the Mediterranean region, with some scattered markers in North America, South America, Africa, and Asia. Overlaid on the map are three green text boxes: the first contains 'SEAD' in white, the second contains 'The Strategic Environmental Archaeology Database' in white, and the third contains 'EXPLORE THE NEW SEAD BROWSER!' in white.

SEAD
The Strategic Environmental Archaeology Database

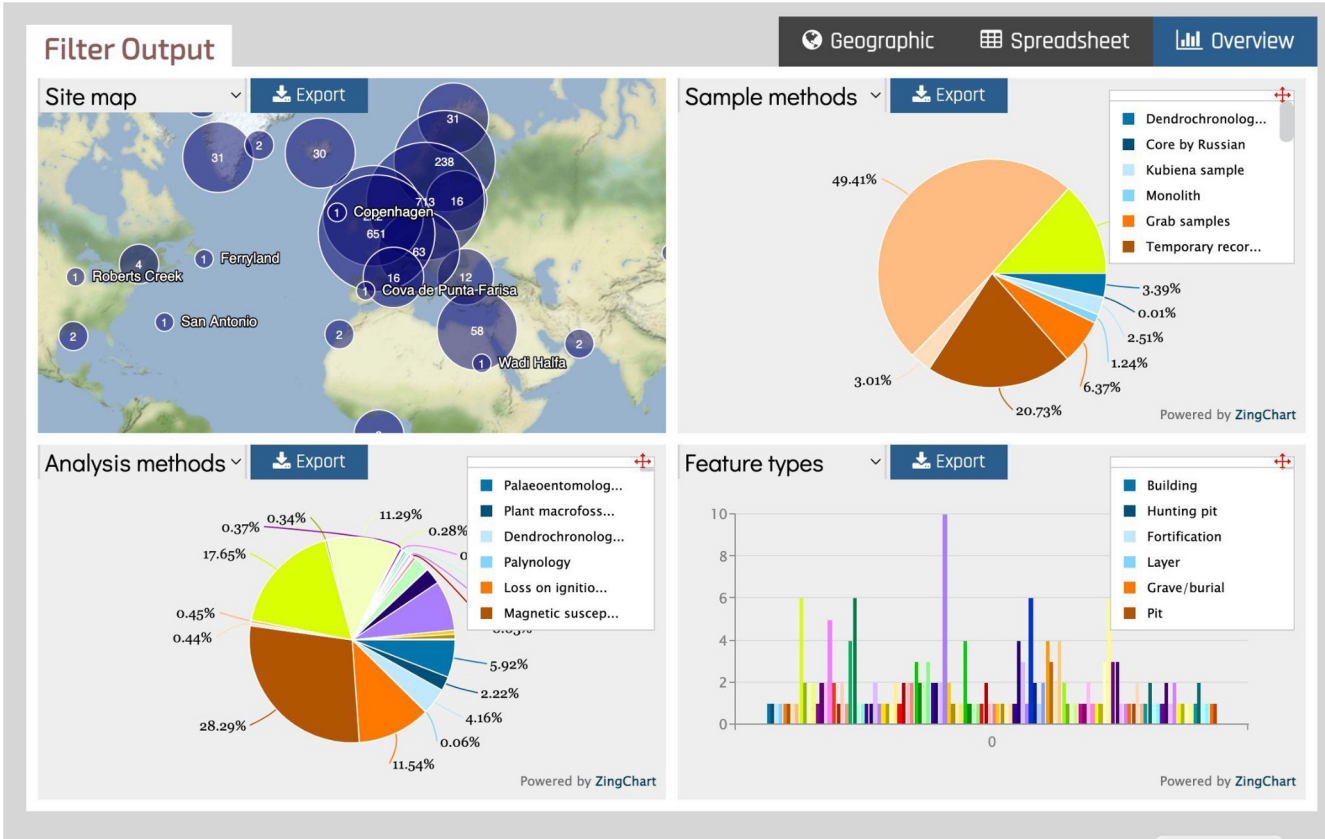
EXPLORE THE NEW SEAD BROWSER!

HOME ABOUT DATABASE CONCEPTS COLLABORATION RESOURCES CONTACT

THE STRATEGIC ENVIRONMENTAL ARCHAEOLOGY DATABASE

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.



ARIADNE PORTAL

1,241 resources in the current view

Display as search result

Filters

All fields Search 406,131 resources...

Clear All Filters X

Filter By Year Filter By Time Periods

Year (from) Year (to) Apply

Resource type

Publisher

Enter text to filter on Publishers. Name Hits

Umeå University X 1241

Contributor

Original subject

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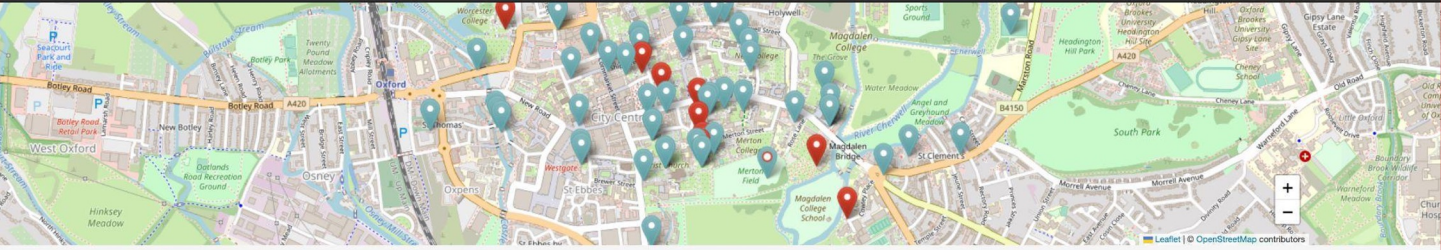
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<https://portal.ariadne-infrastructure.eu/>

ariadne-portal-staging.d4science.org/resource/df4a367457fb07785da5f5f4c119f415ee9f3c611d794045a79afdbbc0894e

ARIADNE PORTAL

Back to search results



Current resource Nearby resource (hide)

Oxford: St Budoc's

Description

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

Megaselia ?rufipes.

Metadata

Original ID: 2869

Landing page: <https://browser.sead.se/site/2869>

Language: English

Resource type: Scientific analysis

Subject - Original: Palaeoentomology

Dating: From 400 until 1216: 400 to 1216

Place: Oxford: st budoc's

Type: Dataset (Provided record)

Resource links

- View resource at provider
- Json
- Xml
- Rdf
- Cite
- Report an issue

Resource is part of

Strategic Environmental Archaeology Database

Thematically similar

Thematically similar resources based on terms in common of:

Subject & Time period

No similar resources found.

Tags

- From 400 until 1216
- Oxford: st budoc's

<https://portal.ariadne-infrastructure.eu/>

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.

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.

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.













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.



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

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



Archaeology
Data Service

Thank You!

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