The Renewal of Ancient Numismatics in the Digital Era

Caroline Carrier, Ludovic Trommenschlager

To cite this version:

Caroline Carrier, Ludovic Trommenschlager. The Renewal of Ancient Numismatics in the Digital Era. The Future of Science, G. Glasson-Deschaumes (MSH Mondes) et M. Heinz (Université de Paris Nanterre), Nov 2023, Nanterre (92), France. hal-04391761

HAL Id: hal-04391761
https://univ-evry.hal.science/hal-04391761

Submitted on 13 May 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Distributed under a Creative Commons Attribution - NonCommercial 4.0 International License
The renewal of ancient numismatics in the digital era

Caroline Carrier et Ludovic Trommenschlager
The web portals and websites include coins struck throughout Antiquity, between the 7th century BC when the first ones were struck in Lydia (Turkey), to the 5th century AD. This includes territories located all around the Mediterranean from Spain to India.

https://www.larousse.fr/encyclopedie/autre-region/Rome_lEmpire_romain/187438
Today, there are around **20 open access portals** allowing researchers to gather thousands of coins held in museums around the world.

Coins are a very important archaeological and historical source:
- they are a testimony of the representation of states
- they are a source about the economy and about politics
- for the Greek world at least, it’s also often the only source we have covering the entire political history of a state
- It’s a precious archaeological artefact to date contexts

=> The study of ancient coins matters for all historians and archaeologists
The renewal of ancient numismatics in the digital era

I. The main websites in Greek, Roman and Celtic numismatics
   II. Their contributions to the discipline and beyond
      III. The main obstacles to this kind of project
Nomisma.org is an international, collaborative project to provide stable digital representations of numismatic concepts according to the principles of Linked Open Data. The website has been created in 2010 with the open source software Numishare created by Ethan Gruber. The project was led by Andrew Meadows and Sebastian Heath from the American Numismatic Society in New York.
Browse Nomisma IDs

Keyword: 
Concept Type: 
Field of Numismatics: 
Sort: 

1 to 100 of 8127 total results.

Asculum
Definition: The mint at the
Type: Mint, Concept

Umar ibn Yahya
Definition: Umar ibn Yahya
Type: Person, Concept

Clay
Definition: Clay is a fine-grained natural rock or soil material that combines one or more clay minerals with traces of metal oxides and organic matter.
Type: Material, Concept

Anaxidikos (II)
<table>
<thead>
<tr>
<th>ID</th>
<th>Field of Numismatics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asculum</td>
<td>The mint at the Mint, Concept</td>
</tr>
<tr>
<td>Umar ibn Yahya</td>
<td>Umar ibn Yahya Person, Concept</td>
</tr>
<tr>
<td>Clay</td>
<td>Clay is a fine-grained natural rock or soil material that combines one or more clay minerals with traces of metal oxides and organic matter.</td>
</tr>
</tbody>
</table>
Athens (Mint, Concept)

Canonical URI: http://nomisma.org/id/athens

Labels

Preferred Label Athens (en), Athen (de), Athènes (fr), Atane (it), Ātrivā (el), Atanas (es)  Additional labels ▶
Alternate Label Athenal (en)

Definitions

en The mint at the ancient site of Athens in Attica.

Geospatial Data

URI: http://nomisma.org/id/athens#this
Latitude 37.94722
Longitude 23.7225
Part Of http://nomisma.org/id/attica#this

Relations

Broader Concept http://nomisma.org/id/attica
Close Match http://catalogue.bnf.fr/ark:/12148/cb11936474k
Close Match http://collection.britishmuseum.org/id/place/x22744
Close Match http://d-nb.info/gnd/4003366-1
Close Match http://dbpedia.org/resource/Athens
Close Match http://geonames.org/264371
Close Match http://sws.geonames.org/264371/
Close Match http://sws.geonames.org/6947693/
Close Match http://viaf.org/viaf/312916042
Close Match http://vocab.getty.edu/tgn/7001393
Close Match http://www.wikidata.org/entity/Q1524
Close Match https://ikmk.smb.museum/ndp/ort/436
Close Match https://pleiades.stoa.org/places/579885
Close Match https://www.freebase.com/m/f/dr27
The main network of Greek numismatics portals

Nomisma
Museums coin catalogues
PELLA
AGCO
SCO
PCO
BIGR
ARCH
CCH
Hellenistic Royal Coinage Online
IRIS
THE COINAGE IN THE NAME OF
ALEXANDER THE GREAT AND
PHILIP ARRHIDAEUS

A BRITISH MUSEUM CATALOGUE

BY MARTIN JOSOPH PRICE

1991

THE BRITISH MUSEUM - SWISS NUMISMATIC SOCIETY

Les rois macedoniens ont été les premiers à réaliser des monnaies monétaires, frappées par les在同一时期，建筑上的铭文和装饰品也被保存下来。该系列的描绘和文本为数众多，它们暗示了这些帝王的权贵和影响力。这些帝王的统治时期也被称为“马其顿时代的希腊化”，这一时期是希腊文化在地中海地区得以繁荣和传播的重要时期。
To fill in the portal, museums worked together to establish a common description protocol in several languages for the coin types, they took pictures of their coins, and they hired people to catalogue their collections. Then the notices were linked to PELLA. Today around 21,000 coins from 23 museums are classified in PELLA and the website is available in 18 languages.
Description typologique

Type d'objet: Monnaie
Intervalle chronologique: 336 B.CE - 323 B.CE
Dénomination: Trièdramique
Technique d'émission: Frappé
Matériau: Argent

Autorité émettrice: Alexandre le Grand
Dynastie: Argobides
Etat: Royaume de Macédoine

Géographique
Atelier: Amphipolis (Valérien importée)
Région: Europe-Macedon-Bithynien and Bithynian District

Avers/Droit
Type: Tête d'Héraclès inerte à dr. couronné d'une dépouille de lion
Divinité: Héraclès

Revers
Légende: Aukter/AMPOY
Type: Zeus assis à g. sur un trône, un aigle dans la main dr. tendue et un sceptre dans la main g.
Divinité: Zeus
Symbole (Dans le champ gauche): Jambon-head vase
Type Series: Price (1991)

Exemples de ce type

Silver Coin of Alexander II of Macedon, Amphipolis, 336 B.C.E. - 323 B.C.E. 1944.100.26724
Collection: American Numismatic Society
Axe 10
Poids 17.05

Silver Coin of Alexander II of Macedon, Amphipolis, 336 B.C.E. - 323 B.C.E. 1944.100.26729
Collection: American Numismatic Society
Axe 10
Poids 16.99

Silver Coin of Alexander II of Macedon, Amphipolis, 336 B.C.E. - 323 B.C.E. 1944.100.26730
Collection: American Numismatic Society
Axe 10
Poids 16.96
Symbols

Click the buttons for letters below in order to select them in order to filter for only those monograms that contain the letters (click Refine Search after the selection is complete). Clicking a selected letter again will deselect it.

Greek:
A B Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω

Refine Search

Records 1 to 24 of 1297
The portal is evolutionary: the new varieties discovered during the cataloguing process have been recorded and will be added to the next version.
The main network of Greek numismatics portals
The main network of Greek numismatics portals

- Pella
- SCO
- PCO
- AGCO
- Nomisma
- Hellenistic Royal Coinage Online
- IRIS
- BIGR
- ARCH
- CCH
The main network of Greek numismatics portals

Hellenistic Royal Coinage Online

IRIS

NATIONAL ENDOWMENT FOR THE HUMANITIES

The American Numismatic Society developed Hellenistic Royal Coinage Online (Hellenistic Royal Coinage Online) to provide a comprehensive catalog of Greek coins from the Hellenistic era. This online resource is an extension of the physical collection held by the American Numismatic Society and aims to serve as a vital tool for numismatists, historians, and enthusiasts. It includes a vast array of images, detailed descriptions, and research possibilities, making it an indispensable resource for anyone interested in the numismatic history of the Hellenistic period.
The main network of Greek numismatics portals.
The 4 portals have been gathered in another portal named “Hellenistic Royal Coinage Online”
The main network of Greek numismatics portals
The ARCH project uses Linked Open Data technology and the standards of the nomisma.org project to establish an overarching portal for the study, curating, archiving and preservation of the monetary heritage of the ancient world – the Greek coinage. It aims to present a high-level overview of all the coin types traditionally subsumed within the discipline of 'Greek numismatics', from the 7th to the 1st century BC. These are made available partly through a new typology (IRIS) created as part of the ARCH project based on existing bibliography, and partly through links to other online portals that cover specific regions or types of coinage. The constituent parts can be found at:

IRIS
Moneda Iberica (MB)
Hellenistic Royal Coinage
Corpus Nummiorram Online

Geographically, the project thus encompasses the ancient Mediterranean world and all of its cultures (with the exception of Rome and its provinces), as well as eastern regions as far as Arabia and the eastern limits of the empire of Alexander the Great. The following regions and coinages are not included and may be consulted elsewhere:

Parthia: parthia.com
Bactria and the Indo-Greeks: The CKUS-INDUS Project
Iron-Age Britain: Iron Age Coins in Britain

For further information on the principles behind the creation of the typology and the people involved please see the about page.

The ARCH project has been supported by a grant under the Joint Programming Initiative on Cultural Heritage. Funding was provided by the Arts and Humanities Research Council in the United Kingdom, the Agence Nationale de la Recherche in France and the Ministerio de Asuntos Económicos y Transformación Digital in Spain.
IRIS (Oe Recorded In Skeleton form) is a high-level typology of Greek coinage created on the principles of Linked Open Data and according to the standards of the onomastica.org project. It provides a typological overview of all ancient coinages not included in existing online typological projects, with a view to establishing a basic coverage of the entire field of Greek numismatics. Broadly speaking, this covers the ancient world from Spain, around the Mediterranean and Black Sea as far as North Africa, as well as the areas of Asia conquered by Alexander the Great. At its first release it thus serves to fill the gaps between the following projects.

It does not cover the regions of Parthia, Bactria or Iron Age ‘Celtic’ coinages, much of which can be found in other resources:

Parthia: parthia.com
Bactria and the Indo-Greeks: The OXUS-INDUS Project
Iron Age Britain: Iron Age Coins in Britain

For further information on the principles behind the creation of the typology and the people involved please see the about page.

The creation of the IRIS typology has been supported as part of the ARCH project by a grant under the Joint Programming Initiative on Cultural Heritage. Funding was provided by the Arts and Humanities Research Council in the United Kingdom, the Agence Nationale de la Recherche in France and the Ministerio de Asuntos Económicos y Transformación Digital in Spain.
The main network of Greek numismatics portals

- Nomisma
- Museums coin catalogues
- PELLA
- BIGR
- CCH
- ARCH
- IRIS
The main network of Greek numismatics portals

Nomisma

Museums coin catalogues

PELLA

AGCO

SCO

Hellenistic Royal Coinage Online

CCH

Nomisma

Museums coin catalogues

PELLA

AGCO

SCO

Hellenistic Royal Coinage Online

CCH

The main network of Greek numismatics portals
There are other thematic web sites:
- for overstrikes: coins struck with new types to make new coins (often we can see the previous types)
- for die studies to identify the dies (ie. the matrix) used to print the pictures on the coins (for studying the process of striking and to know the number of coins that were struck)
- For automatic die recognition
Roman and Celtic numismatics

Old reference works have been used as a basis for online numismatic typology (Roman Republican Coinage)
The Roman Republican Die Project (RRDP) aims to provide URIs for each reverse and reverse die connected to Michael Crawford's Roman Republican Coinage (RRC, 1974) types published in Coinage of the Roman Republic Online. RRDP is based on Richard Schaefer's archive of Roman Republican Dies, comprising more than 300,000 specimen images. The digitized version of Schaefer's archive is available on ARCHER, the digital archives of the American Numismatic Society (see here).

Each die in RRDP is linked to specimens in STIAAM, a standalone specimen database for private materials or museum collections that have not already been published to the Nomisma.org Linked Open Data ecosystem. Additionally, dies are linked, when applicable, to coins already published to CRRO from collections such as the American Numismatic Society, Bibliothèque nationale de France, and the Berlin MintKabinet, as to avoid duplication of materials between Schaefer's archival records and canonical URIs published by holding institutions.

In an initial phase (January 2021–2022), RRDP will focus on the die transcription of Crawford types 336-392 (95-75 BCE). This chronological range has been chosen for its historical and numismatic relevance. This project has been undertaken under the scientific supervision of Lucia F. Carbone (ANS) and Liv M. Yarrow (Brooklyn College – CUNY – Graduate Center).

For more information on how to use these materials, see How to Use RRDP.

RRDP is made possible by stable numismatic identifiers and linked open data methodologies established by the Nomisma.org project. Die data are made available with an Open Database License.
Iron Age Coins in Britain (UK)

Ancient British Coins (ABC) is the most comprehensive reference book for the typology of the Iron Age coins of Britain. ABC catalogues 999 types of coins found in Britain from around the early to mid-2nd century BC through the 1st century AD. The earliest issues were imported to Britain from the Continent, but they were shortly thereafter minted locally, remaining in circulation even after Roman occupation.

Iron Age Coins in Britain (IACB) is now available as a digital research tool that provides access to an edited ABC online. IACB is made possible by stable numismatic identifiers and linked open data methodologies established by the Nomisma.org project. IACB is built on the numbering system created by the Ancient British Coins (ABC) series published in 2010 (available to purchase here). On this website, some aspects of this typology have been changed (e.g. descriptions, spellings), therefore this website is not the responsibility of the publishers of ABC.

Details about the fields and their data are given on the Info page. Details about the digitisation project are given on the About page.
Welcome to Online Celtic Coinage

Online Celtic Coinage is the website of the Celtic Working Group of Nomisma.org. OCC develops Linked Open Data concepts for pre-Roman Iron Age coinages.

Recent news

- CELTIC COIN INDEX DIGITAL (CCID) goes live!
- Ancient British Coinage goes online!
- ClaReNet – A new project on Classification and Machine Learning for Celtic coinages

Forthcoming events

Keine bevorstehenden Ereignisse
Coins Hoard of the Roman Empire (uses ontology of Nomisma but no uri link)
Roman Provincial Coinage project embodies a new conception of Roman coinage. It presents for the first time an authoritative account of the coins minted in the provinces of the empire and shows how they can be regarded as an integral part of the coinage minted under the Roman emperors.

The aim of this major research project is to produce a standard typology of the provincial coinage of the Roman Empire. This represents the first systematic treatment of the civic coinage at the height of the Roman empire. The material presented is an invaluable source of information for imperial portraiture and titulature, the response of the cities to the establishment of a new political order under the Roman empire, the way the government controlled the provinces, the internal history of the cities, and the role of the provincial coinage in the economy of the Roman empire as a whole. It will thus not only meet the needs of numismatists but will also be an essential reference book for historians, epigraphists, archaeologists and other students of the Roman empire.

The publication of Roman Provincial Coinage volume I (44 BC-AD 69) in 1992 marked the start of this international initiative, which will comprise ten volumes in all. Roman Provincial Coinage is published by British Museum Press and the Bibliothèque Nationale de France, and the online publication is based in the Ashmolean Museum, University of Oxford.
Bienvenue sur le site web du système d'antiquités portables
Le projet Portable Antiquities Scheme est géré par le British Museum et Amgueddfa Cymru - Museum Wales pour encourager l'enregistrement d'objets archéologiques trouvés par des membres du public en Angleterre et au pays de Galles. Chaque année, des milliers d'objets archéologiques sont découverts, dont beaucoup par des utilisateurs de détecteurs de métaux, mais aussi par des gens qui se promènent, jardinent ou se promènent dans leur travail quotidien. Les résultats enregistrés avec le programme aident à faire progresser les connaissances de l'histoire et de l'archéologie de l'Angleterre et du pays de Galles.
Two projects underway in France (Nummus Université de Caen and Base Trouvailles Monétaires BnF)
National and international project in Spain
Application dedalo.dev

Moneda Ibérica

MIB, acrónimo de moneda ibérica, es una base de conocimiento para el estudio, conservación, catalogación, archivo y difusión del patrimonio numismático antiguo de la Península Ibérica y del sur de Francia que incluye producciones monetarias de cecas griegas, púnicas, ibéricas, celtíbericas, vasconas, lusitanas y latinas. El centro del proyecto lo ocupa el catálogo formado por más de 4.000 tipos monetarios acuñados entre los siglos VI y I a.C., respaldados por un archivo documental de 100.000 monedas. Se incluyen piezas de museos, de colecciones privadas y de las subastas nacionales e internacionales de las últimas décadas. Los contenidos y las funcionalidades de esta web se actualizan y mejoran de forma progresiva.
The contributions of the websites and web portal to the discipline and beyond

All these open access websites and portals reflect a collaboration between researchers from several institutional horizons (museums, laboratories, universities) with the same will to reuse old sources (monetiform objects, archives, unpublished and published studies); with them, we can complete new studies that were impossible before, since digital tools are the only ones allowing for the management of big data or linking documents from throughout the world.
These different portals and websites changed numismatists’ working methods:

- it’s now possible to quickly identify coins and to cite the best references even if the articles or books are only available in specialized libraries
- It’s possible to quickly gather a coin corpus including the main collections. Until a few years ago, it was necessary to spend months going to different countries to record data and take pictures
  - we can work on big data
- we have efficient tools to correct mistakes made in the past
  - it’s possible now to link data for thousands of coins
<table>
<thead>
<tr>
<th>Coinages</th>
<th>Writing systems</th>
<th>Unicode</th>
<th>Ontographs</th>
<th>Allographs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greek</td>
<td>Greek</td>
<td>U+0370–03FF</td>
<td>28</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>Etruscan</td>
<td>U+10930–1093F</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Umbrian</td>
<td>U+10930–1093F</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Oscan</td>
<td>U+10930–1093F</td>
<td>21</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Cypriot</td>
<td>U+10890–1089F</td>
<td>55</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>Lycian</td>
<td>U+10920–1092F</td>
<td>29</td>
<td>185</td>
</tr>
<tr>
<td></td>
<td>Brahmi</td>
<td>U+11000–1107F</td>
<td>65</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Kharoshti</td>
<td>U+1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iberian and Punic</td>
<td>Palaeohispanic</td>
<td>Not</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phoenician-punic</td>
<td>U+1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phoenician, Levantine, Judean, and Nabatean</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The PIM (Police des inscriptions monétaires) project

Fig 5: Tableau récapitulatif des caractères PIM

Fig 15: Variantes phéniciennes de la lettre mem
The open science studies done in numismatics are also a methodological model for others archaeological and historical fields that wish to make their own data freely accessible. For example, “Pondera online » about ancient weights.
The main obstacles to this type of project

- Access to material (authorization to study or publish coins)
- Access to funding (computer specialist, online, update)
- Work habits (unpublished studies, project abandoned)
- Lack of legislation (in France, Open Science policy is encouraged by the Law. In archaeology, there are administrative reports but few publications)
Thanks for listening!

We wish this digital age another twenty years.