

# Linked Data Aggregation

## Lessons from the Pelagios Commons

Leif Isaksen, Lancaster University

Rainer Simon, Austrian Institute of Technology

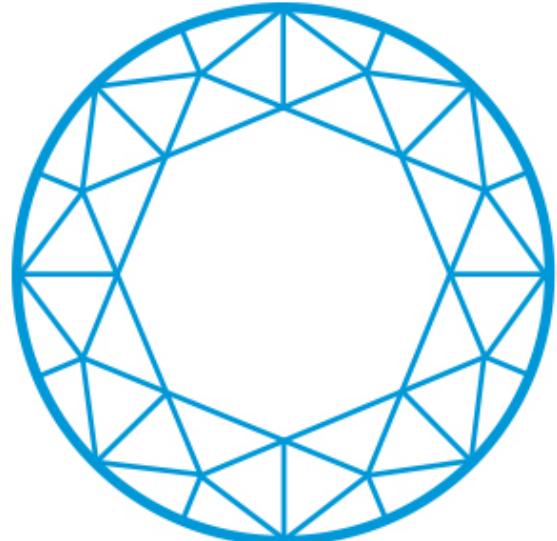
Elton Barker, The Open University

Andrew Lindley, Austrian Institute of Technology

Pau de Soto, Institute of Catalan Studies

<http://commons.pelagios.org>

@Pelagiosproject



# What is an ecosystem?



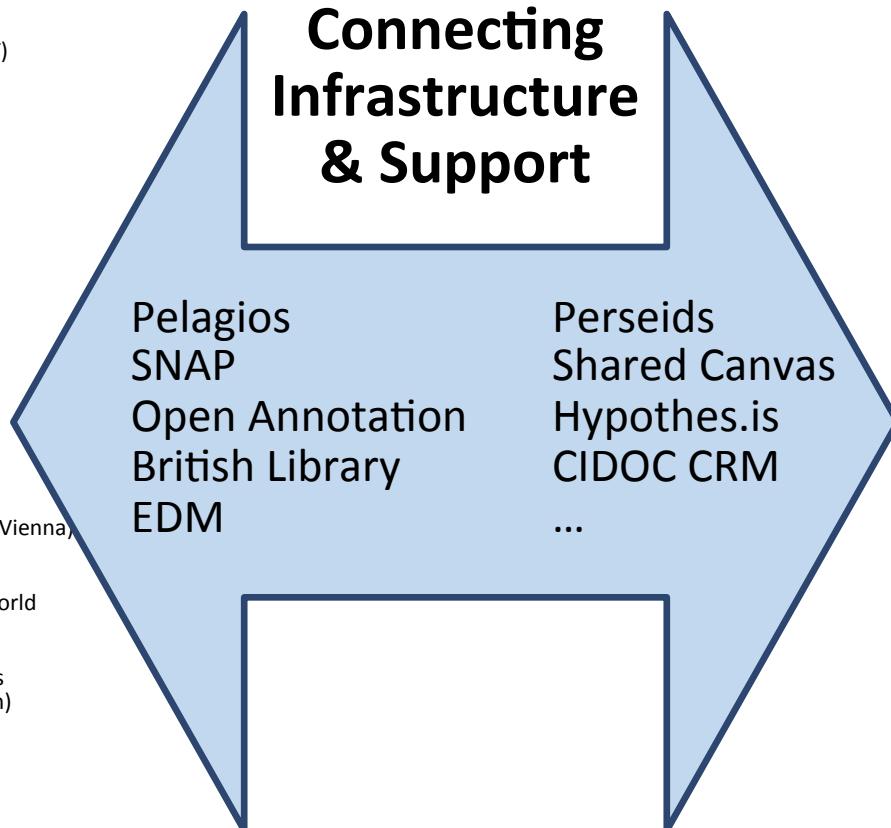


# Linked Pasts | An Emerging Ecosystem



## Resource Curators

Google Ancient Places (OU, Soton)  
Perseus Digital Library (Tufts)  
Arachne (Cologne)  
SPQR (King's College, London)  
Digital Memory Engineering (AIT)  
Open Context (UC Berkeley)  
CLAROS (Oxford)  
PtolemyMachine (Holy Cross)  
Ure Museum (Reading)  
FastiOnline (AIAC)  
Nomisma (ANS)  
Regnum Francorum Online  
Papyri.info (ISAW/NYU)  
Ports Antiques  
Oracc (U. Penn.)  
Meketre (Vienna)  
OCRE (ANS/ISAW)  
Squinchpix  
ORBIS (Stanford)  
MJBC (Cambridge)  
ISAW Papers (ISAW)  
Totenbuch (Bonn/Cologne)  
PAS (The British Museum)  
SAWS (KCL/Uppsala/Stockholm/Vienna)  
Trismegistos (K. U. Leuven)  
AWMC (Chapel Hill)  
Encyclopaedia of the Hellenic World  
DM Project (Drew)  
Ancient History Encyclopedia  
Dickinson College Commentaries  
Edinburgh Geoparser (Edinburgh)  
EDH (Heidelberg)  
EAGLE  
LGPN (Oxford)  
...



## Concept Schemes

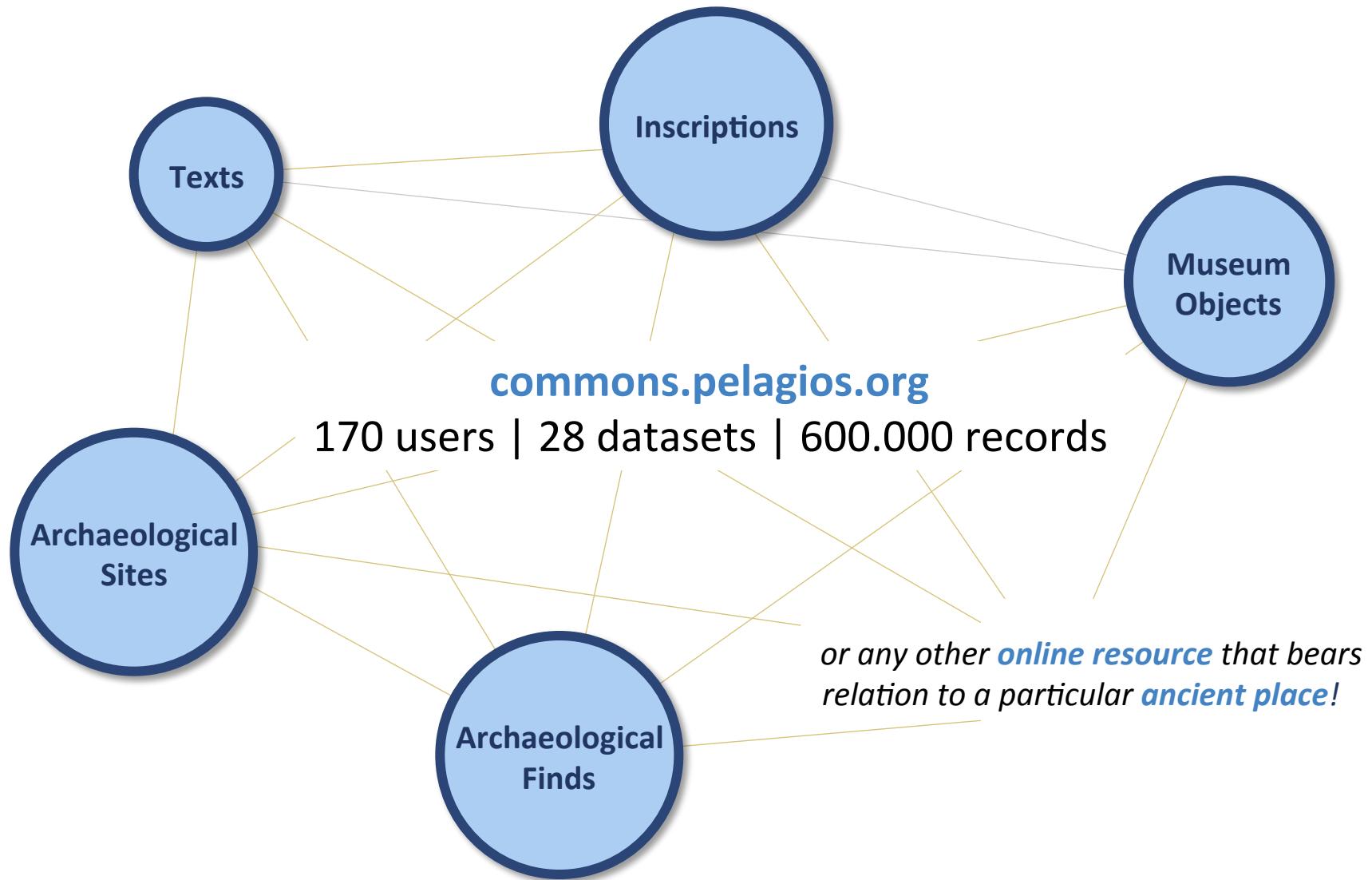
Pleiades	
PastPlace	
Getty Thesauri	
PeriodO	
ChronOntology	
Canonical Text Services	
SENSCHAL	
SNAP	
OCRE	
...	



## What is Pelagios?

A Decentralised  
Community & Infrastructure  
for Linked Open Geodata in the Humanities

# Pelagios | Linking Data, Openly



## What Pelagios isn't | One ring to rule them all



- Not a data aggregator
- Not a repository
- Not a standard data model

Connectivity through *common references* rather than a *common schema*

## The concept I Don't Unify the Model – Annotate!



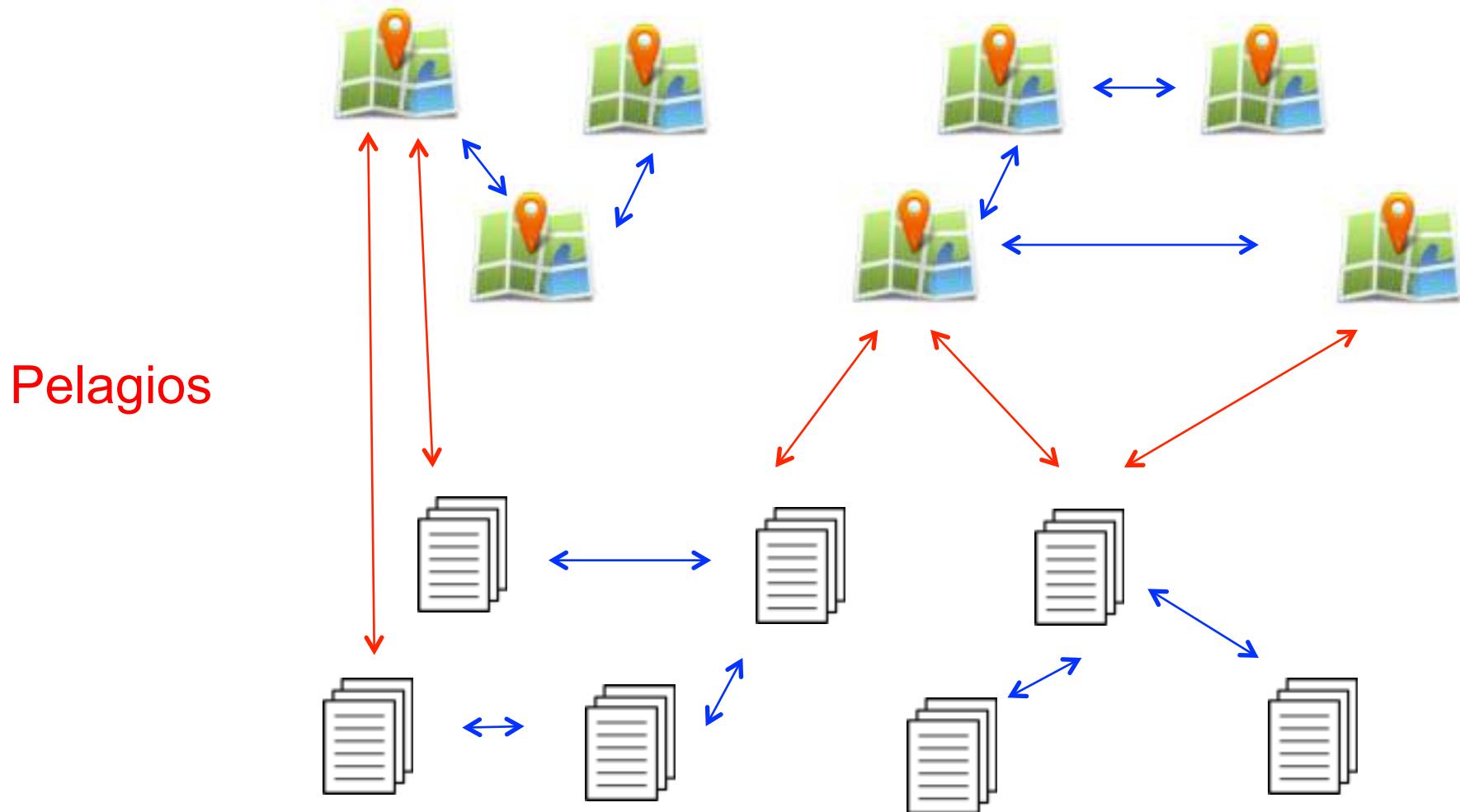
pleiades:579885  
(Athenae)

pleiades:570685  
(Sparta)

## The concept I Don't Unify the Model – Annotate!



## Pelagios network | Linking different knowledge domains



## Toponym detail | Finding the right gazetteer match



The screenshot shows the PELAGIOS interface for finding toponym matches. The main area is a map of the Mediterranean region. A search bar at the top left contains the query "Miletus". Below it, a sidebar lists search filters: "PastPlace 4 results" (selected), "Pleiades 6 results" (selected), and "DARE 3 results" (selected). The main content area displays a tooltip for "Miletus" (Settlement) located in Miletus, Balat, Pleiades ID 599799. The tooltip includes the text "... into the lands of Milenus and Smyrna; and he took ...". To the right of the map, a detailed view of the Miletus entry shows its description: "A major city in Caria" and "Miletus, Balat". Below this are several small icons and a "Save Comment" button. The entire interface is overlaid with orange circles numbered 1 through 9, highlighting specific elements for analysis.

- 1. Map location of Miletus in Asia Minor.
- 2. Another map location of Miletus in the Aegean Sea.
- 3. The tooltip for the settlement entry.
- 4. The search filters sidebar.
- 5. The detailed entry card for Miletus.
- 6. A row of small icons.
- 7. A quote from Herodotus referring to Miletus.
- 8. A link to add a comment.
- 9. A large empty text area for comments.

Miletus

13 results

PastPlace 4 results

Pleiades 6 results

DARE 3 results

Miletus Stadium - Miletus

Miletus Stadium - Miletus

Ancient stadium, modern Miletus Stadium - Miletus, Miletus Stadium - Miletus, TR

Miletus Theatre - Miletus

Miletus Theatre - Miletus

Ancient theatre, modern Miletus Theatre - Miletus, Miletus Theatre - Miletus, TR

Miletus Bouleterion - Miletus

Miletus Bouleterion - Miletus

Ancient theatre, modern Miletus Bouleterion - Miletus, Miletus Bouleterion - Miletus, TR

... into the lands of Milenus and Smyrna; and he took ...

Miletus Settlement

Miletus, Balat

pleiades:599799

OK Alternatives Next >

Miletus A major city in Caria Miletus, Balat

Red an army into  Add Tag

Save Comment

© MacBox | Data © OpenStreetMap and contributors, CC-BY-SA | Tiles and Data © 2013 AWMC CC-BY-NC 3.0

# Pelagios Gazetteer Interconnection Format

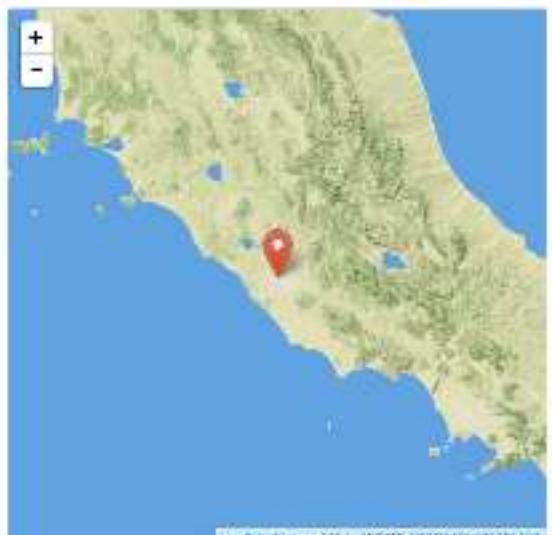


PELAGIOS API Home Datasets Places

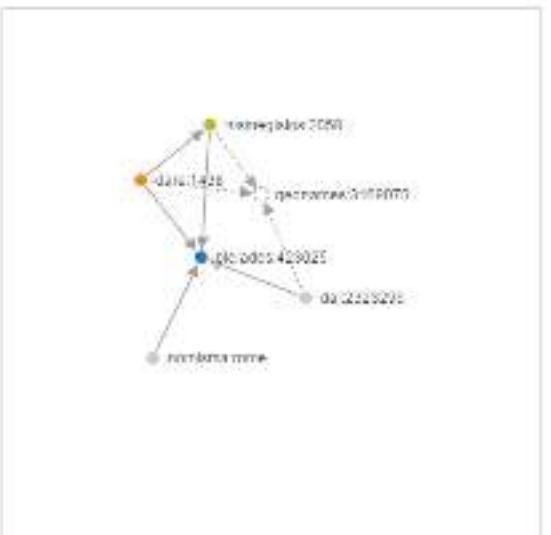
placeid #23025

# Roma

Rome, Roma/Rome  
The capital of the Roman Republic and Empire  
9° LAT 41.8917 LON 12.4852  
<http://uploads.wik.org/placesM23025>



A map of Italy with a red pin marking the location of Rome. The map shows the coastline and major cities. A legend at the bottom right indicates 'Lat/Lon' and 'Scale 1:1,000,000'. A zoom control with '+' and '-' buttons is located in the top-left corner of the map area.



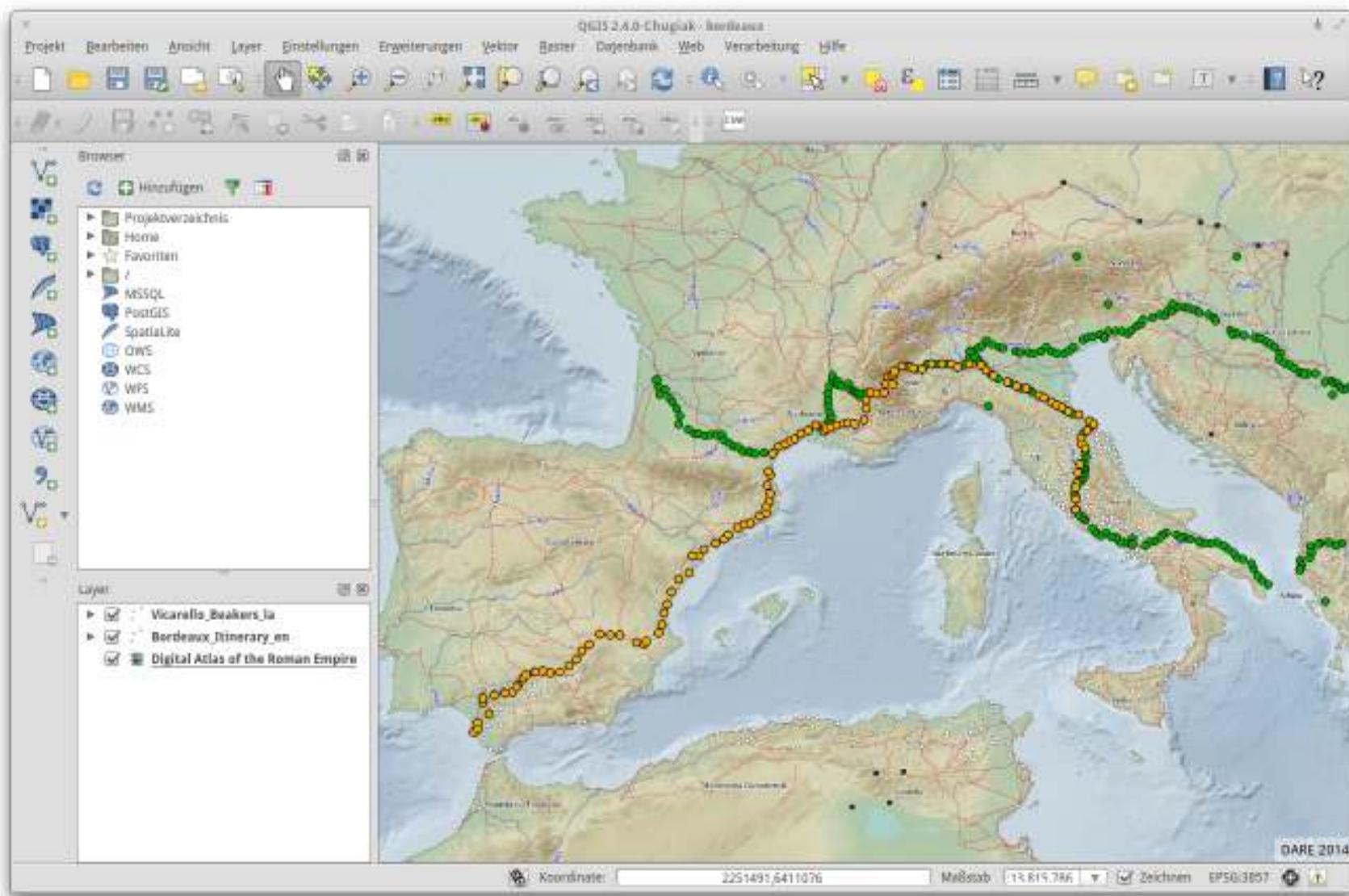
A network graph visualization showing connections between various place IDs. Nodes are represented by colored circles (yellow, orange, blue, green) and are labeled with their respective place IDs: 'placeid #23025', 'd2:odoo429025', 'd2:odoo429026', 'd2:odoo429027', and 'placeid #23025'. Edges represent relationships between these nodes, forming a complex web of connections.

[Open in Pelagios](#)

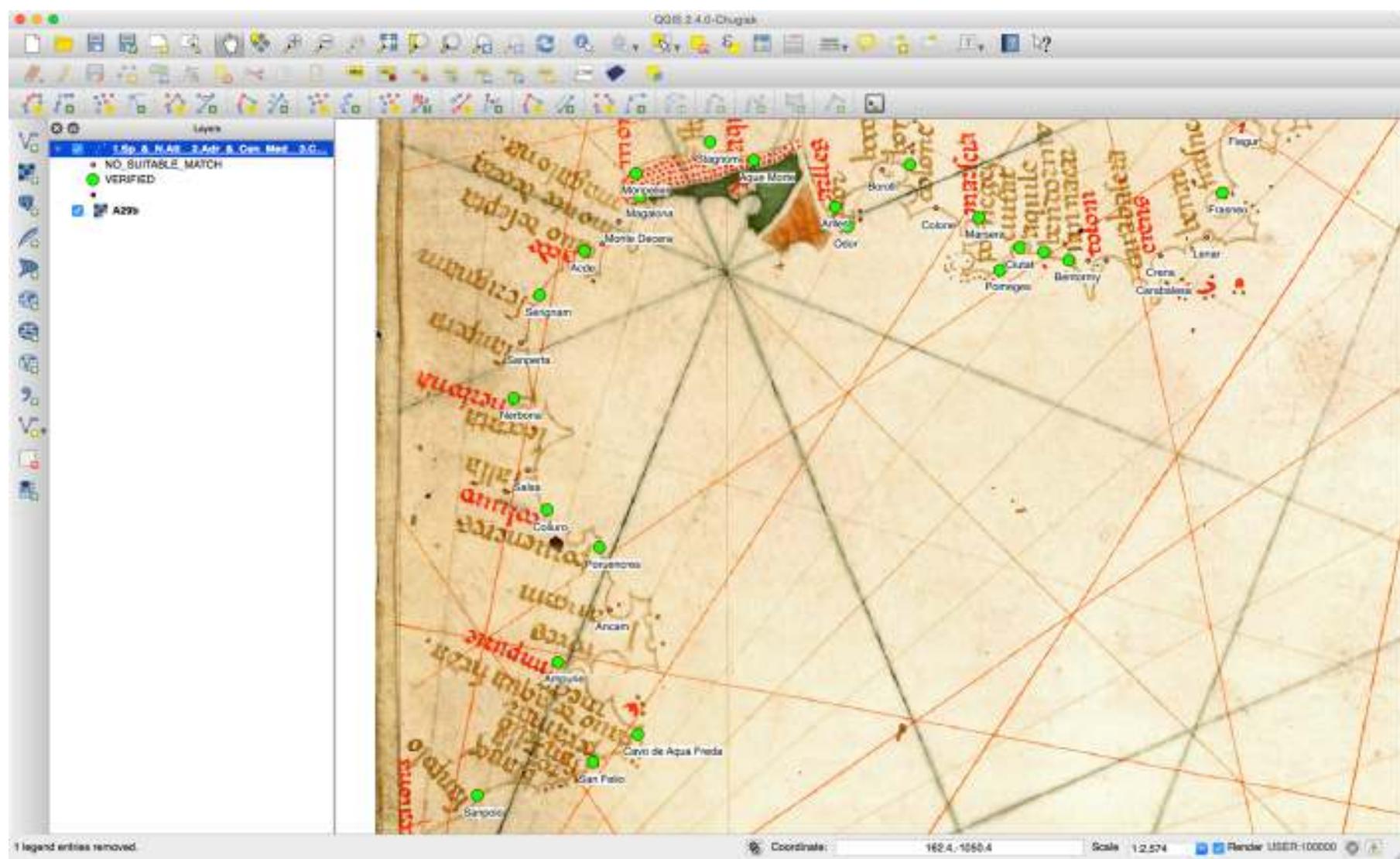
## Roma in Other Gazetteers

[View M23025](#) [Edit M23025](#) [View place M23025](#) [View place M23025](#)

## Pelagios use cases | Download CSV to query the data



## Pelagios use cases | Overlaying non-geodetic spatial systems



## Inschriften: Detailansicht

HD-Nr. HD065341

TM-Nr.

Pleiades ID ↗ 216927 (↗ Inhalte aus dem Pelagios Netzwerk)

Bearbeitungsstand überprüft an Foto

letzte Änderungen 9. Oktober 2012

Bearbeiter Cowey

### Fundumstände / Aufbewahrung

nces to "Antiochia/Theoupolis", outside Open

Place: Pompeii  
<http://pleiades.stoa.org/places/433032>



A place described in the Pleiades gazetteer: An ancient city of Campania, destroyed by the volcanic eruption of Mt. Vesuvius in AD 79, named as UNESCO World Heritage Site in 1997. [Further information at Pelagios](#)

Egypt, in four o  
gue as trap

[26 references]

- CLAROS [22 references]
- Nomisma.org [25 references]
- Regnum Francorum Online [1 references]
- Pleiades Annotations in the Perseus Digital Library [24 references]
- SAWS - Sharing Ancient Wisdoms [3 references]
- AWMC - Ancient World Mapping Center [2 references]
- Ure Museum [1 references]
- Open Context [159 references]
- Google Ancient Places [17 references]
- Pelagios Annotations from the Portable Antiquities Scheme [150 references]
- Omnes Viae [1 references]
- ORBIS: The Stanford Geospatial Network Model of the Roman World [1 references]
- Ancient History Encyclopedia [1 references]
- Epigraphic Database Heidelberg [8 references]

Linking data provided by Pelagios

PELAGIOS API    Home    Datasets    Places

Pelagios 3 •

## Greek Tradition Documents

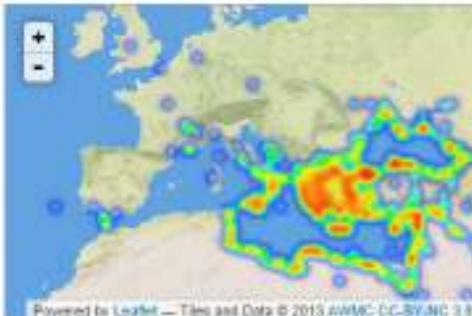
by Pelagios 3 Project

Early Geospatial Documents from the Greek Tradition:  
BC 700 – AD 550

30 items with 18,612 references to 2,502 unique places

### Most Frequently Referenced Places

Sparta	856
Athenae	693
Theba/Theban	390
Argus	390
Messenia	374
Achala	364
Olympis	341
Dolphi	333
Arcadia	320
Macadonia	290



A choropleth map of the Mediterranean region showing the density of ancient Greek tradition documents. The map uses a color gradient from blue to red, where red indicates higher concentrations of references. The highest density is visible in the central Mediterranean, particularly around the Peloponnese and the Aegean islands. There are also significant clusters in North Africa and the Black Sea area. A legend in the top left corner shows a plus sign for zooming in and a minus sign for zooming out. In the bottom right corner, there is a "Powered by Leaflet" credit and a "Tiles and Data © 2013 AWMC CC-BY-NC 3.0" license notice, along with a "Full Screen" button.

Powered by Leaflet — Tiles and Data © 2013 AWMC CC-BY-NC 3.0  
Full Screen

Find a Place...

About this Map | Visit Pelagios Commons



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a6ff5df on Jul 8, 2015

1 contributor

169 lines (111 sloc) | 18.6 KB

[Raw](#)[Blame](#)[History](#)

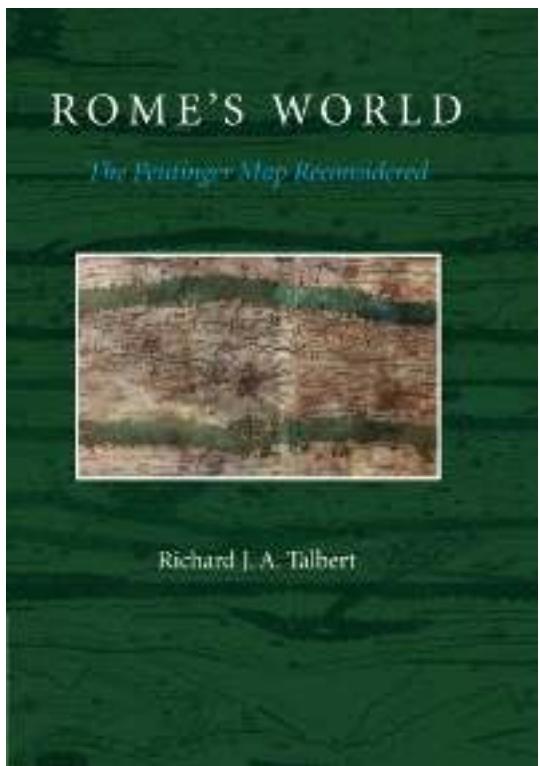
## Peripleo

Peripleo (Greek for "to sail", "to swim around") is a search & browsing engine for data in the [Pelagios network](#). Peripleo is work in progress.

### Background - the Pelagios Initiative

Pelagios (Greek for 'of the Sea') is a community network that facilitates linking of online resources that document

# Scholarly research | Filling the Blanks



## Peutinger Table

Nivirgitab  
Simnana  
Tvbactis Mvn  
Casa Rimoniana  
Adcisternas  
Nalad(vs?)  
Dissio Aqva Amara  
Chosol  
Mvsvla  
Ad ficvm  
Pretorivm  
Pvtea nig  
Macomadase l(orvm)  
Zvre  
Adspelvncas

## Guidonis Geographica

Nivergi  
Simadana  
Thubactis  
Rastitiana  
Cisternas  
Nadalus  
Dision  
Onusol  
Musol  
Ficum  
Praetorium  
Putea nigra  
Macitapades maiores  
Zures  
Speluncas

## Ravenna Cosmography

Nivergi  
Simadana  
Thubactis  
Rusticana  
Cisternas  
Nadalus  
Dision  
Onusol  
Mulsol  
Ficum  
Praetorium  
Putea nigra  
Macumades maiores  
Zaures  
Speluncas

?



## Decentralising Pelagios in 3 ways:

### Technical:

- Recogito as software and open service
- Integrating Peripleo with other services

### Social:

- 10 Special Interest Groups (SIGs)
- Overall management devolved to Pelagios Commons Committee

### Sustainability:

- Long term financial and governance planning

## Linked Data annotation without the pointy brackets

Create maps from text. Annotate images. Connect your research to other data on the Web and make it more open, visible and reusable. Without the need to become a Semantic Web expert.

[Learn More](#)[Register for Recogito](#)

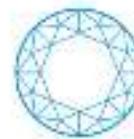
Signing up signifies you have read and agree to our Terms and Conditions of Use.

Recogito Now Open for  
Alpha Testing!

Our official opening is scheduled for December 2016. But feel free to explore Recogito already now, while it's under development. We appreciate your feedback, bug reports, feature ideas, etc. Please get in touch via the [Recogito Users Group](#) or [GitHub](#).

Warning: please note that until the official opening, data may be lost without advance notice.

Pelagios Commons provides online resources and a community forum for using open data methods to link and explore historical places



What does Pelagios Commons allow me to do?



About

Explore the data

Community

Resources

About the community

Members

Blog

Special Interest Group

Ancient Greek SIG

Roman SIG

Medieval, Byzantine & Islamic SIG

East Asian SIG

Modern SIG

Archaeological SIG

Linked Places SIG

Gazetteer SIG

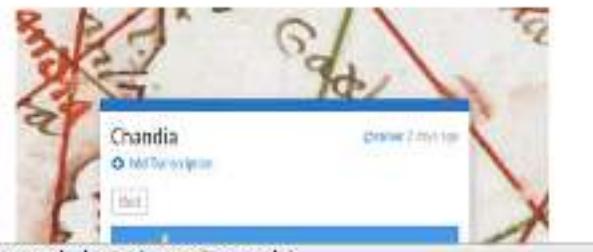
Maritime SIG

Micro region SIG

Pelagios Commons provides a community forum for using open data and exploring historic



What does Pelagios Commons allow me to do?



## **2016 Resource Development Grants**

- Linking Linked Places
- Cross-cultural After-Life of Classical Sites (CALCS)
- CroALa index locorum:  
a gazetteer of place names in Croatian Latin texts
- Mediaeval Iberia through Pelagios Commons
- Kima : towards a Hebrew Gazetteer

**LINKED PASTS CONFERENCE  
15-16 December 2016, UNED, Madrid**

## Lessons?

1. Linked Data works better as a tool for discovery and connectivity than as tool for analysis
2. Linking Open Data is collaborative or it is nothing
3. HTTP URIs are more important than RDF or ontologies
4. Mutual benefit is essential but the benefits need not be the same for everyone
5. It is very hard to manage a growing number of partners, but essential to make personal connections. Is decentralisation the answer?
6. Know your limits ☺

**Thanks to the Andrew W. Mellon Foundation,  
JISC, the AHRC, and all our partners**

**Website and forums:** <http://commons.pelagios.org>  
**Twitter:** @Pelagiosproject  
**Email:** l.isaksen@lancaster.ac.uk

