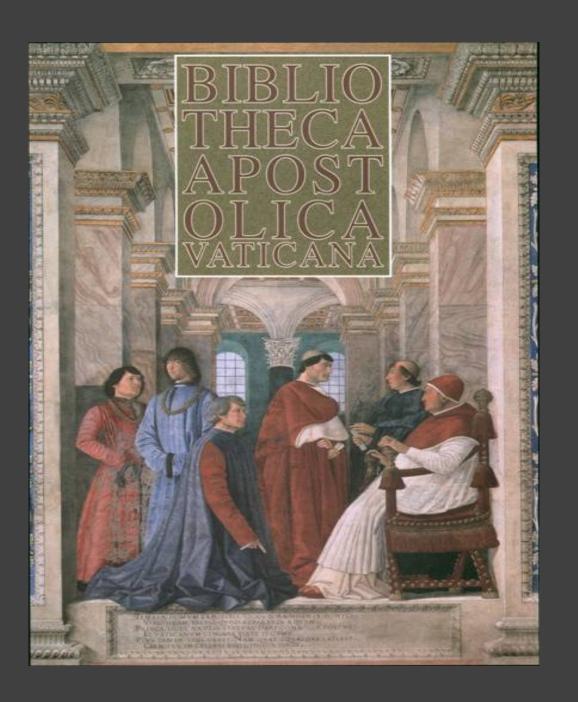
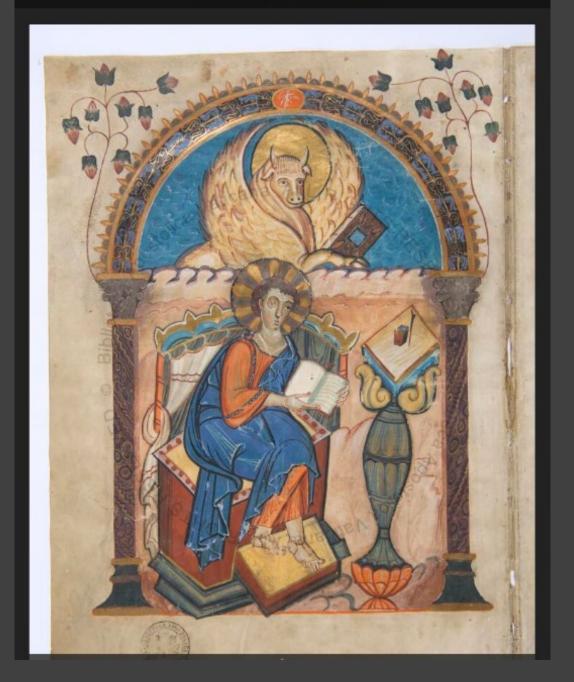
FIESOLE RETREAT 2019
AT THE CUTTING EDGE: AI, IIIF, MIRADOR, LD4P, SHARE-VDE & DISCOVERY BY CONCEPTS
APRIL, 3 2019

# IIIF and Mirador

PAOLA MANONI VATICAN LIBRARY



#### Manuscript – Pal.lat.50



#### Manuscript - Vat.ar.368



### Manuscript – Vat.lat.3225



#### Manuscript – Ross.555



## Manuscript - Vat.lat.3773



#### Manuscript - Vat.arm.3



# Manuscript - Borg.sir.74

#### Manuscript - Ross.498

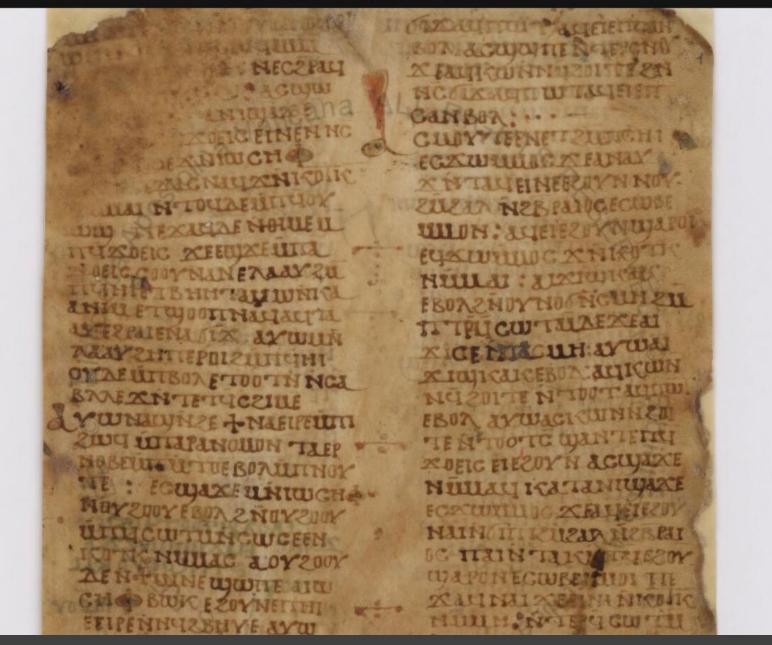




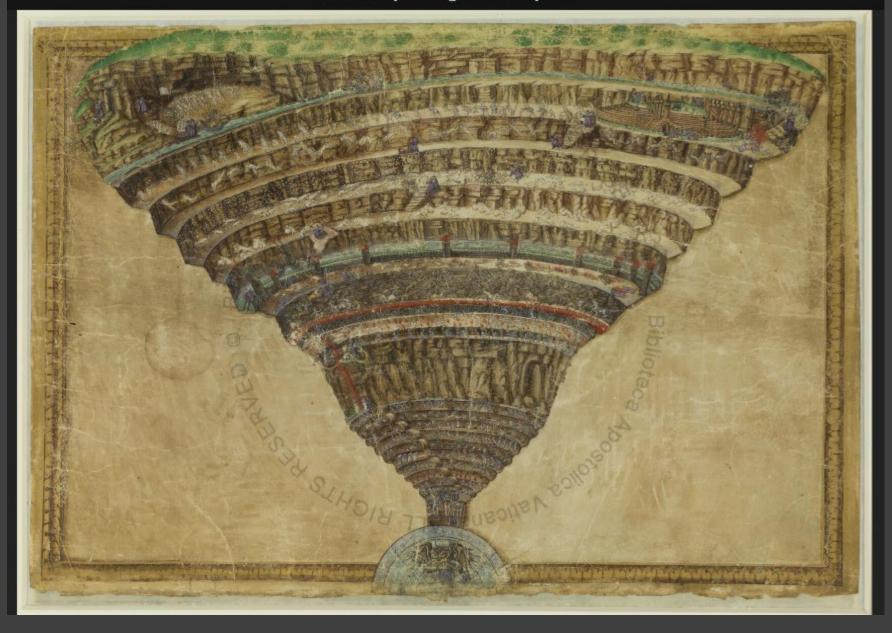
#### Manuscript – Arch.Cap.S.Pietro.A.26



#### Manuscript – Borg.copt.109.cass.l.fasc.3



#### Manuscript – Reg.lat.1896.pt.A

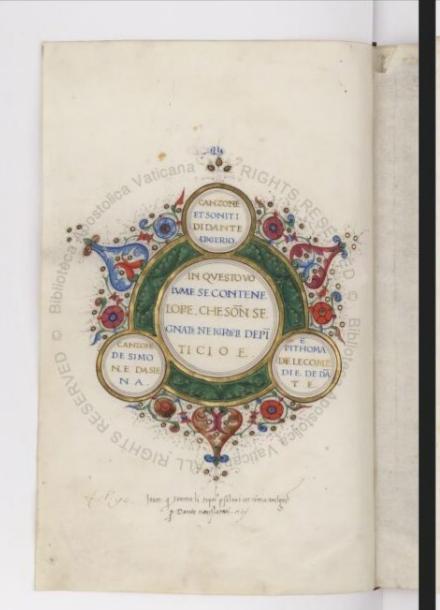


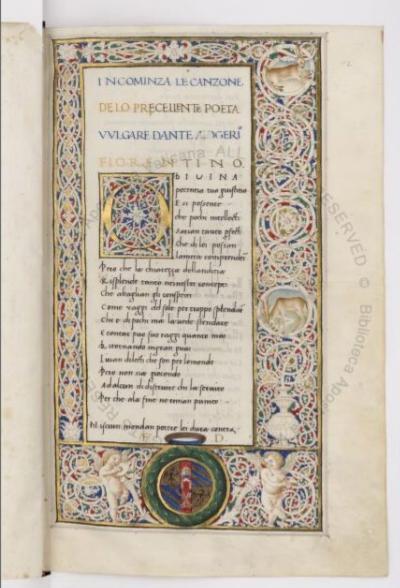
# Manuscript – Pal.lat.1276 Viola purpura.



# Manuscript - Borg.cin.531 From hours auto rion agus Jines astimate, in Los ten plasman acticantes Jinguarens se mag stratus di name de la la la company de potent depites ann per misqui had per la lant.

#### Manuscript - Urb.lat.687





ANAPECKAITATAZWCIA
TOMTAHEJOMATEWHTY
TOMTAHEJOMATEWHTY
TOMTAHEJOMATEWHTY
TOMTAHEJOMATEWHTY
KATAKAIOHAZEETITHA
KATAKAIOHAZEETITHA
KATAKAIOHAZEETITHA
KATAKAIOHAZEETITHA
CAMBRUTOCTEPHTATHA
EZWETIPAKAOYAOWOC
ECTAIOTIATAZACTIAHA
THEAPPIACAYTOYATO
TICEIKAITAIATILA

έληλέτιστη κε Η το ηπόι λλογτογή τη ηποιοισκή λγτογέη μα βαωκά ι άπο Ο ΑΝΗ Υποτλοχέι μα είχη Τογλικη έκα ικη θήτω Εληλεμική ως κε καικη ΜΙΑΝ Η ΑΥΟ Ο ΥΚΕΚΑΙΚΗ ΘΗ Ο ΕΤΑΙ ΤΟ ΓΑΡΑΡΙΎΡΙΟ ΑΥΤΟΧΕ ΟΤΙΝ

EÀN LEMAXUNTALLYOÀN
APECKAITILTÀZUCINTY
NÀI KAÈNTACTPIÈXOYCA
KÀI ÉLEABHTOTIALLON
AYTHCMHÉLEJKONICMÉ
NON ETIZHMION ZIMIU
BHCETA KABOTIÀNETI
BAAHOÀN HETHCTYNALIÒ
LUCCELMETAÀZIÚMATOC
CÂMACEZEIKONICMENONTI

EXNACTIONATAZHTON OCHALMON TOYOTKE TOYXYTOYHTONUPOXX MONTHCOEPANAINHC AYTOYKMEKTYPAWCH EXEYDEPOYCEIANOCTE **AEIAY TOYCKN TITOYO** DEYYMOLYALINY. PANASTONGAGNITATOY ATHOMOTHY OLD MID THEBETATIAINHEATTY EKKOTHENEYBEPOYCE EZMIDCTELETAYTOYCL TITOYOLONTOCKYTWH. ( EANAEKEPATICHTAYPO ANAPAHTYNAIKAKAIAN.

ΑΥΤΟΥΚΑΙΜΗ ΑΦΑΝΙΟΗ ΑΥΤΟΝΑΝΕΛΗ ΣΕΚΝΑΡΑ ΗΓΥΝΑΙΚΑΟΤΑΥΡΟCЫ ΘΟΒΟΛΗΘΗ CETAL ΚΝΙΟΚΥ ΡΙΟΚΑΥΤΟΥΠΡΟΚΑΠΟΘΑ ΝΕΙΤΑΙ ΕΑΝΑΕΛΥΤΈΡΑΕ ΠΙΒΑΝΘΗ ΑΥΤΌ ΔΕΌ CEI ΑΥΤΡΑΤΗ ΕΥΥΧΗΙ ΚΑΥΤΕΥ ΕΝΑΕΥΙΟΝΗΘΥΓΑΤΕΓΑ CANAEY ΙΟΝΗΘΥΓΑΤΕΓΑ ΚΕΡΑΤΙCΗ ΚΑΤΆΤΟΔΙ ΚΑΙΦΜΑΤΟΎΤΟΠΟΙΗ CΟΥCΙΝΑΎΤΟ ΕΑΝΑΕ ΠΑΙΑΚΕΡΑΤΙCΗΟΤΑΥ ΡΟCΗΠΑΙΔΙΟΚΗΝ ΑΓΙΥ ΡΙΟΥΤΡΙΑΚΟΝΤΑΔΙΑΡΑ ΧΜΑΑΦΟ ΕΙΤΦΙΚΥΡΙΟΘΑ ΑΥΤΌΝ ΚΑΙ ΟΤΑΥΡΟCΑΙ ΘΟΚΟΛΗΘΗ CETAI

ΕλΝΑΕΤΙ ΓΑΝΟΙ ΣΗΛΑΚΕ Η ΑΤΟΜΗ ΕΝ ΤΚΕ ΜΗ ΚΑ ΑΥ Η ΑΥ ΤΟΝ ΚΑΙ ΕΜΠ ΕΝΕΚΕΙ ΜΟ ΕΧΟ ΕΝΟΙΟ ΟΚΎ ΡΙΟ ΕΤΟΥ ΑΑΚΚΟΥΑ ΠΟΤΙ ΕΕΙ ΑΙ ΕΥ ΤΕΙ ΕΝΑΙΟ ΕΝ ΤΟ ΚΥΡΙΟΙΑΥ ΤΌΝΤΟΝ ΤΕΤΕΛΕΥΤΗΚΟ ΕΝΥΤΟΝ

EXMACKEPATICHTICTING

EXMACKEPATICHTICTING

TAYPOCTAYPONTOY INN

CIONKAITENEY THICHAIL

ACCONTAITON TAYPO

TAITO APPYPONTOY

TAITO APPYPONTON

TAITO APPYPONTON

TAITO APPYPONTON

TAITO APPYPONTON

EXMACTNOPIZHTAIOTAY

EXMACTNOPIZHTAIOTAY

POCOTIKE ATICTHICECTI
TIPOTHICEXO ECKAINPO
THOTPITHICHME PACKAIN
MEMAPTY PHME HOIDECT
TUKY PIUN KÄIMPIACPA
HICHAYTO HAHOTICEI
TAYPO HAHTITAY POYO
AFTETEAEYTHKUCAY
TROECTAI

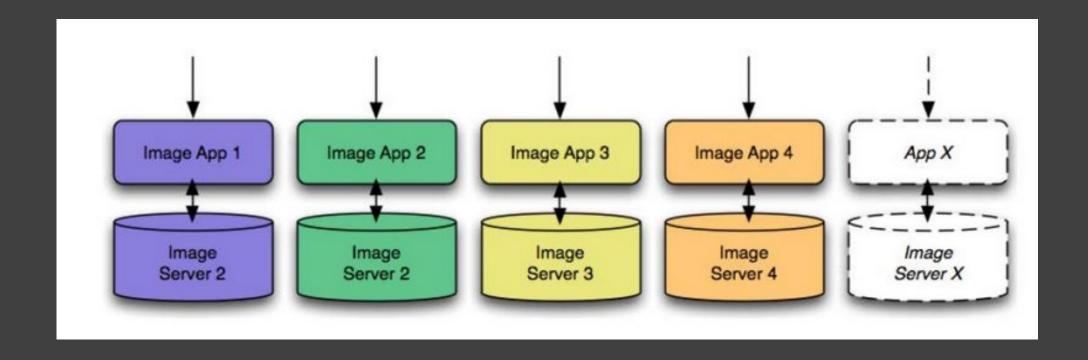
ELNAÉTICKZÉTHMOCKO HIPOBATON KAI COAZH HATIOAUTAI HENTEM CXOYCÁHOTÍCEIÁNTI TOYMOCXOYKAITECCE PARPOBATAKNTITOY TROBATOY

EAMAGENTUALOPYTMAN

CAP, ococii.



# The problem



# What do users and institutions need?

Ability to contextualize images from across collections and institutions

Actively engage with images - deep zoom, pan, annotate

Combine images from across the world in one space

Be free to use the image viewer of choice

Cite and Share work - confidence in stable image URLs

# What do institutions need?

Make images highly available and open

But in a standardized, extensible way

Ability to load/transfer large, high resolution images easily without server overwork

Not only a view openness and access but data persistence and longevity

System flexibility

Publish once, reuse often

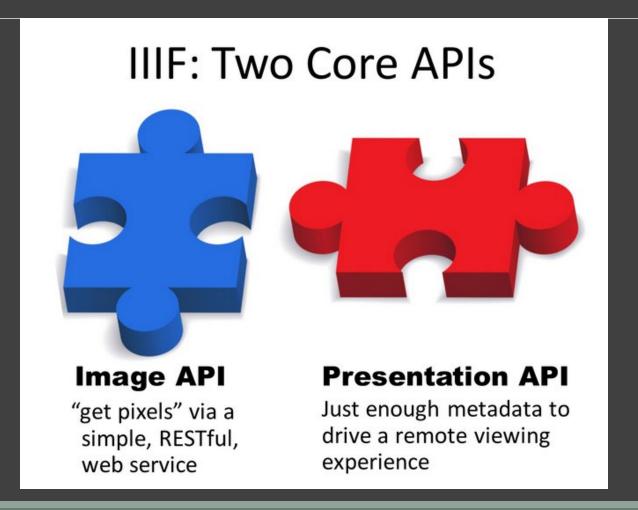


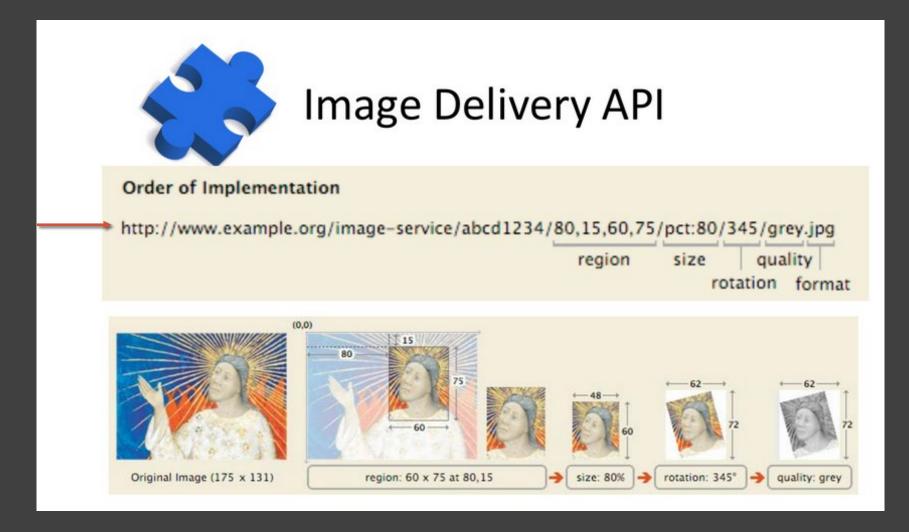
# GOALS

To give scholars an unprecedented level of uniform and rich access to image-based resources hosted around the world.

To define a set of common Application Programming Interfaces (APIs) that support interoperability between image repositories.

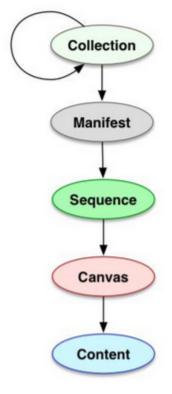
To develop, cultivate and document shared technologies, such as image servers and web clients, that provide a world-class user experience in viewing, comparing, manipulating and annotating images. (iiif.io/about/)





# **Presentation API**





## Structure

Collection, Item, Sequence,
 Parts

# Properties

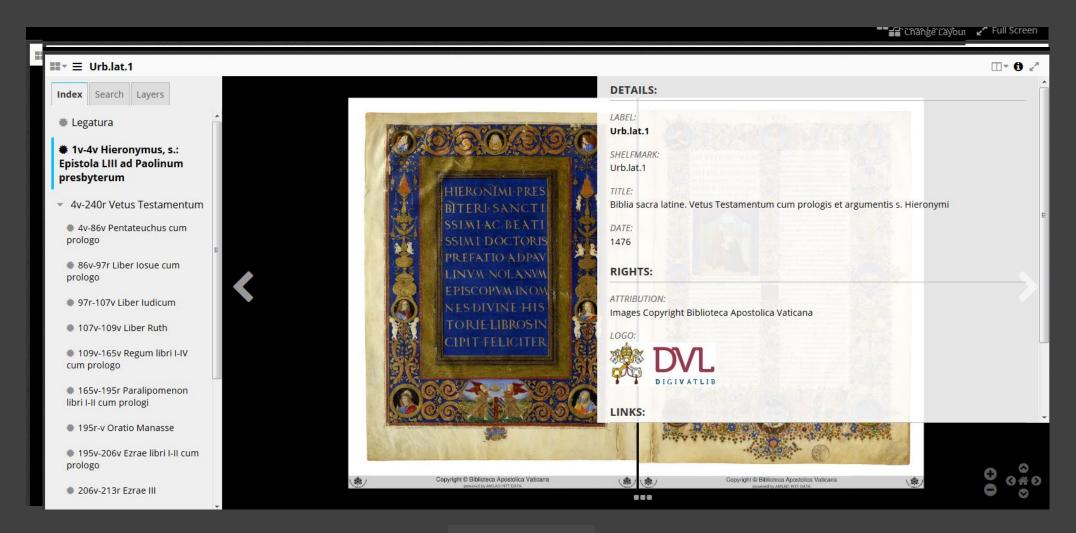
 Labels, description, license, attribution, links

http://iiif.io/api/presentation/2.1/



# Image + Presentation = Object





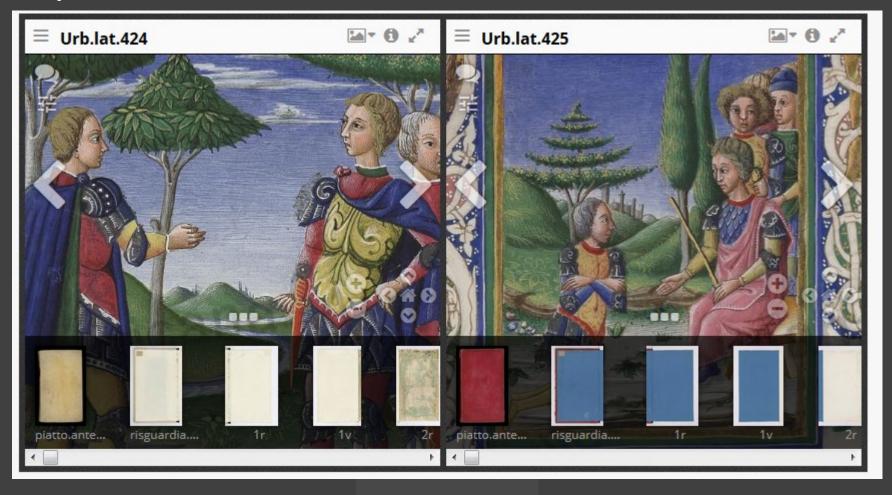


# Mirador has been optimized to display resources from repositories that support the IIIF



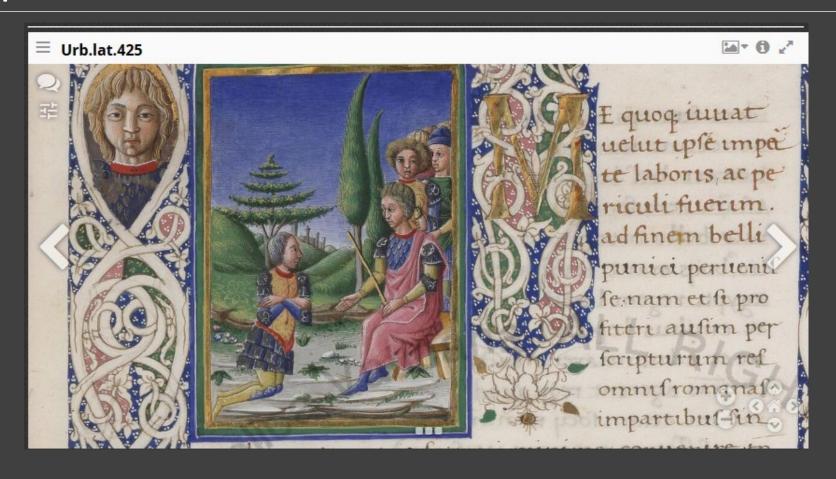


# Comparison...





# Deep-zoomable canvases...



# https://digi.vatlib.it



ME ONLINE CATALOGUES DIGITAL COLLECTIONS

**ABOUT** 

#### The current implementation

19.280 digital objects (including 17.496 manuscripts) - i.e. over 8 million images





#### **Selected Manuscripts**









>

# Web Thematic Pathways of Medieval Manuscripts

The Vatican Library, in conjunction with Stanford University Libraries is carrying out a three-year project funded by The Andrew W. Mellon Foundation.

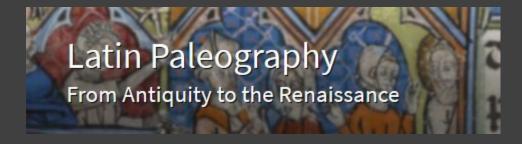
The project aims to demonstrate, among the advantages of the IIIF for manuscripts, how the annotation level is a fundamental innovation for the study of contents: transcriptions, comments, comparative analysis of texts and images

https://spotlight.vatlib.it

October 1st 2019



# Courses in Paleography



edited by A.M. Piazzoni



edited by T. Janz

#### 2. FORM AND MATTER OF THE MANUSCRIPT BOOK

#### What is codicology

The manuscript book is a unique and complex object, which has two fundamental aspects:

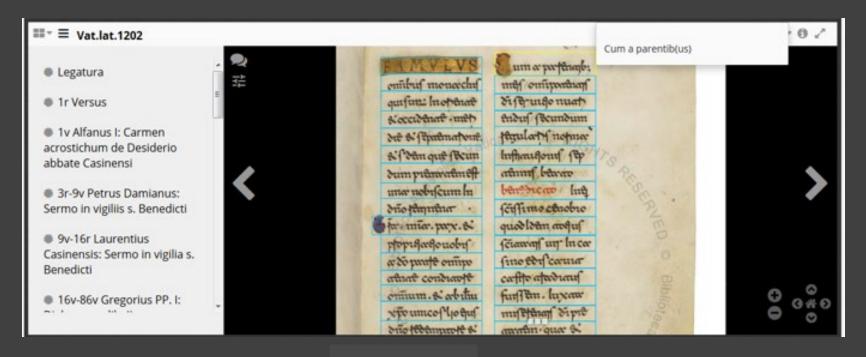
- · first of all the book contains a text, or several texts (and this is the reason why it was normally produced);
- but it is also a material object, which represents a specific culture and precise techniques, and is comparable to an archaeological
  monument. It offers physical signs not only of the time and place in which it was made, but also, possibly, of the events that surrounded its
  history and its whereabouts over the centuries.

The first aspect involves various disciplines, such as philology and textual tradition; the second aspect involves codicology, which some also define as "book archeology."

The manuscript is the main object of paleography, a discipline that examines every aspect, both those concerning the text and those related to the execution of the writing of that text from a material perspective. For this reason it is important to provide some information of the codicological type.

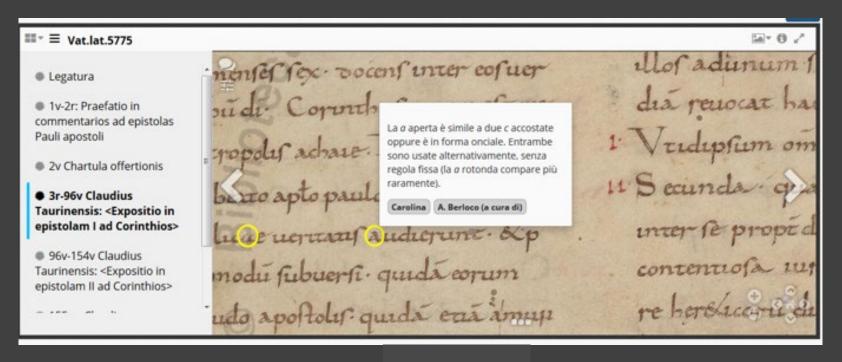


# Annotation - transcriptions





### Annotations – 'A' Carolina



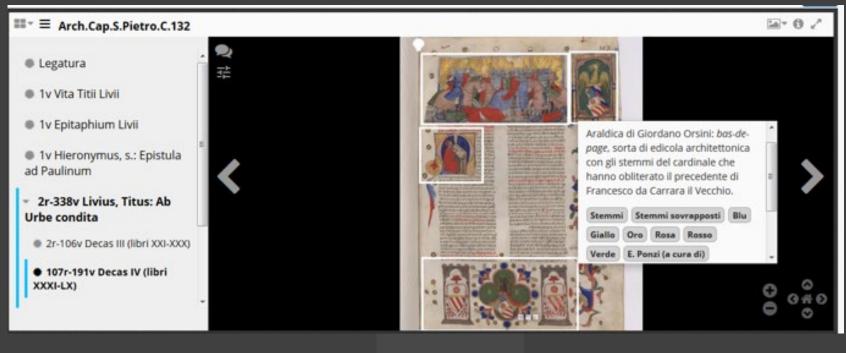


# The evolution and transmission of texts of specific works: Latin Classics



edited by M. Buonocore

### Annotations - Illuminations





#### [Thematic pathway - Latin Classics]

#### Pal.lat.1538

■ E Pal.lat.1538

Legatura

1r Hieronymus presbyter:
Vita Senecae

1r-1v Ps. Seneca: Epistulae
ad Paulum

1v Epitaphium Senecae
(Anthol. Lat. 667)

幸

Bibliotec

\* 1v-79r Seneca: Epistulae ad Lucilium (1-87, 89-124)

79r-80v Martinus Bracarensis seu Ps. Seneca :

in copia. vaic partie unic-partino teneceta-Honens bianio anome men thub lutes. farbe que et lette me mognieté ve faco. Delw ci fere ut pfellins fil ai onfil of ce. q wobfuare in ma plonageler romana bonoi fenatufoceffit pleas eplanlumi lai elge. ne ai aprila et reverote aupia illo effice qui arbitri fucio vale conocifié magr. Senoca Premi paule bine puttafne me baur pui fale. Instructuo lurinofifet as reinocenna ma fubrice furphan fumatizatione of tam duros ramas obnovios nos vratur omis mis undier pumus a nob chia andemmit जो um fit bet feram cque aiect utami foro qo forfacthe whee inite feliates fine males iponar-Culterpfor esis: maccone phelip pi filmi-co polo mania dvonifici Alra quap 61 in clare amb quicqo librir haut Incedin urbs romana maifeste sepe un patratur colte: 9: ficffai builtas potuff bumana.quo i cae fir er ipune in bijs tenebus lann heeret. Low rome Can with a Wood franchers Colin Got

cepedin Ace naile paulus fence falurem feruncia ubi ca que sir renelata apanos ferun sen forcissir certus es ego magro sas ferun sen forcissimi ser Aon qui e matia que corpi mos si ibis stabile an remaintis de sectus maneris metins. Or princita ma asse anta inostines societe untatas nomi te anto re sectos à ibis pomps ouveto retromas ires besibile sopiam. Que pre movi areperent es peran esqui tento apante sopiame due presente si plus asse comes asparamentabiles em plus som asparamentabiles em plus do cario plei qui or mime sectant in simuatio do timo di plei qui do manie sectant in simuatio do timo bosem sine compete a pena asim parto ao ori istic premite pale senera luñe nobi

Ann Labor meini fiipt, p muiic boncer.

ose paul a nob os cuocar illiar aths. "

Ito alias pe bac follineare aimas.

Belo tirnis bospitaterra nale.

Corps and the follements acres fares

#### MANUSCRIPT INFORMATION

Resource type: Manuscript

Collection: Pal.lat.

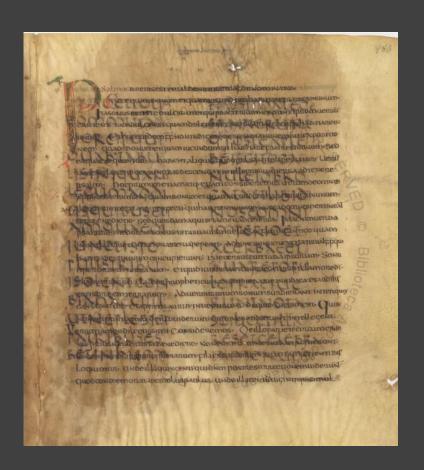
Shelfmark: Pal.lat.1538

Library: Biblioteca Apostolica Vaticana

Date: sec. XIV-XV

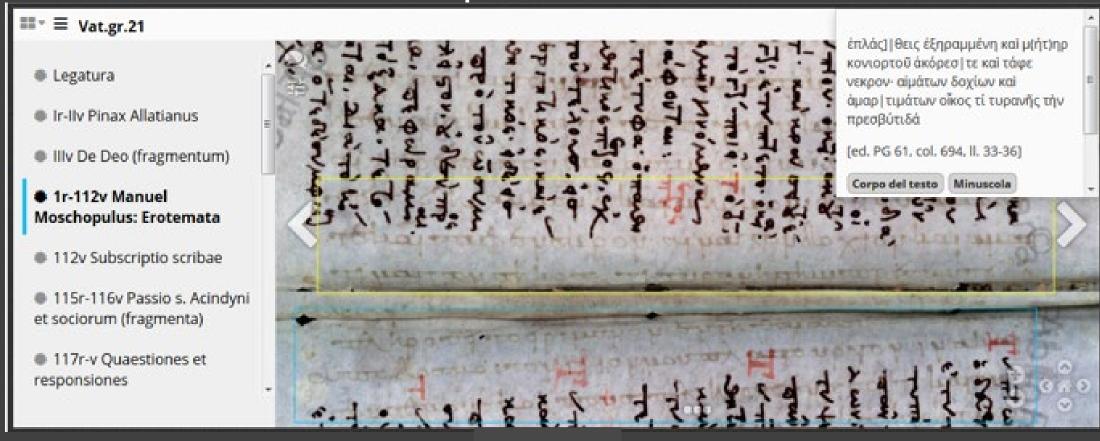
Country: Italia

# Vatican Palimpsests: Digital Recovery of Erased Identities



edited by A. Nemeth

# Annotation – scriptio inferior





#### [Thematic pathway – Vatican palimpsests]

#### Important Palimpsests

Pal.lat.24 <inf.1>

Pal.lat.24 <inf.2>

Pal.lat.24 <inf.3>

Pal.lat.24 <inf.4>

Pal.lat.24 <inf.5>

Pal.lat.24 <inf.6>

Pal.lat.24 <inf.7>

Pal.lat.24 <inf.8>

Pal.lat.24 <inf.9>

Pal.lat.24 <inf.10>

Urb.gr.154 <inf.1>

Urb.gr.154 <inf.2>

Urb.gr.154 <inf.3>

Urb.gr.154 <inf.4>

Vat.gr.14 <inf.1-2>

Vat.gr.19 <inf.1>

Vat.gr.19 <inf.2>

Vat.gr.19 <inf.3>

Vat.gr.21 <inf.4>

Vat.gr.103 <inf.>

Vat.gr.316 <inf.1>

Vat.gr.316 <inf.2>

Vat.gr.345 <inf.>

Vat.gr.504 <inf.>

#### Pal.lat.24 <inf.3>

Pal. lat. 24 includes several Biblical books of the Old Testament (*Tobias*, *Judith*, *Job*, *Esther*). It was initially copied in an uncial hand in 22 long lines per page in the seventh or eighth century. The writing support of this original manuscript seems to have entirely consisted of nine recycled Latin manuscripts and a Greek one ranging from the fourth to the sixth century. Soon after its production (8th century), probably already at Lorsch, this manuscript was restored and its missing texts were copied on brand-new parchment folios (ff. 1–8, 17–37, 54–71) by another uncial hand in an irregular density of 17–21 long lines per page, each measuring 110×85 mm today. It found its way to the Palatine Library at Heidelberg whence it arrived to the Vatican Library in 1623.

### Hyginus, Fabulae (5th c.)

A bifolio (ff. 45+38) preserved fragments from Hyginus mythological handbook (Fabulae 67, 5-8; 68 B, 69 A; 70 A; 71 A). One larger leaf (ca. 145x100 mm) with 17 lines per page and uncial script from the fifth century was folded into two when it was recycled in the seventh or eighth century. The surviving leaf preserves texts from the Thebean mythology on Oedipus and his son, Polynices (ch. 67).



### The Humanist Prince's Library

Federico da Montefeltro and His Manuscripts



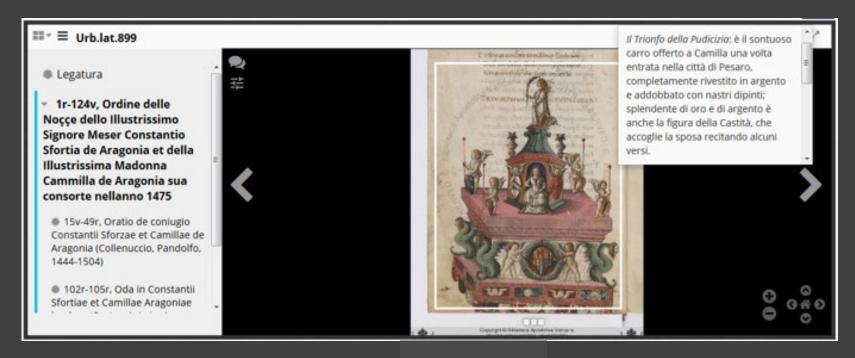






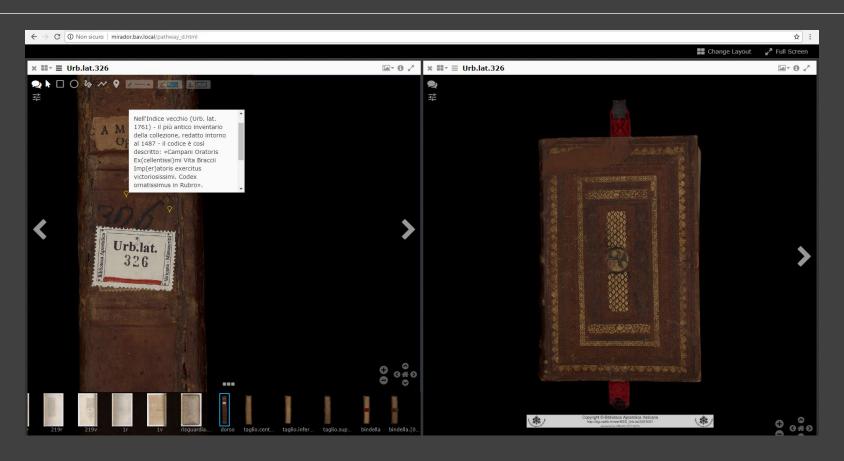
edited by M.G. Critelli

# Annotation - Illustrations in blank space

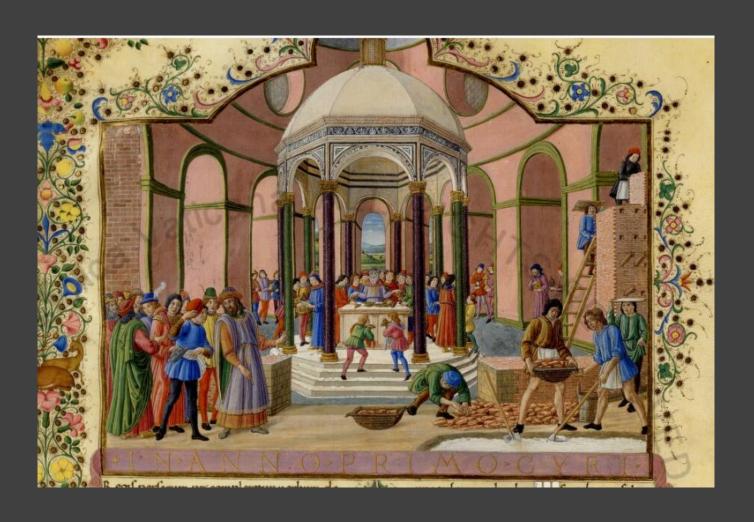




### Annotation - original binding

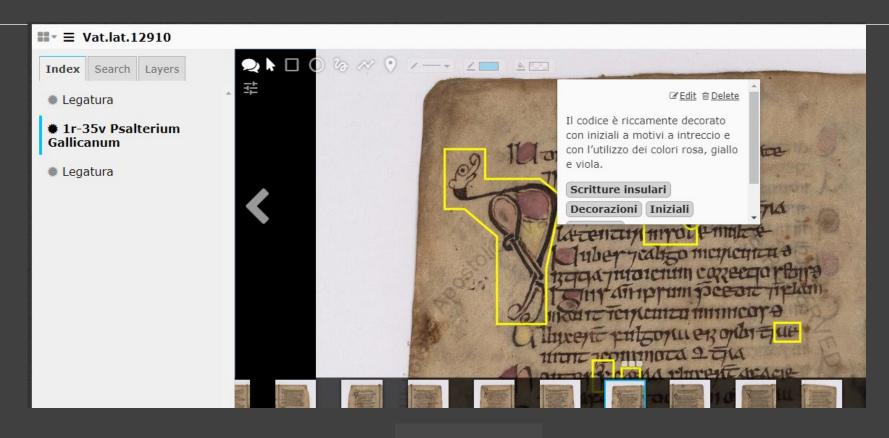


Mirador development for this project has contributed to and benefited from this community development effort.



### Contribution from this project: polygonal annotation

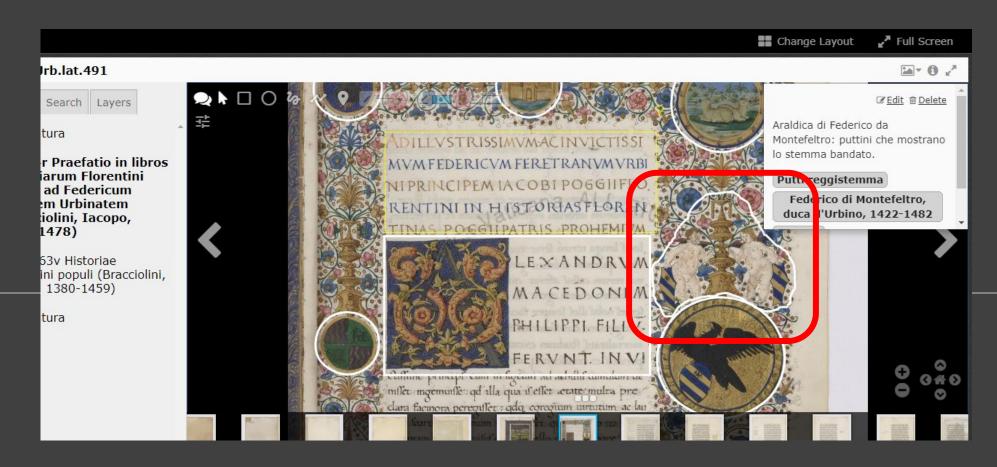
### e.g. Vat.lat.12910, f. 28v (sec. XI)





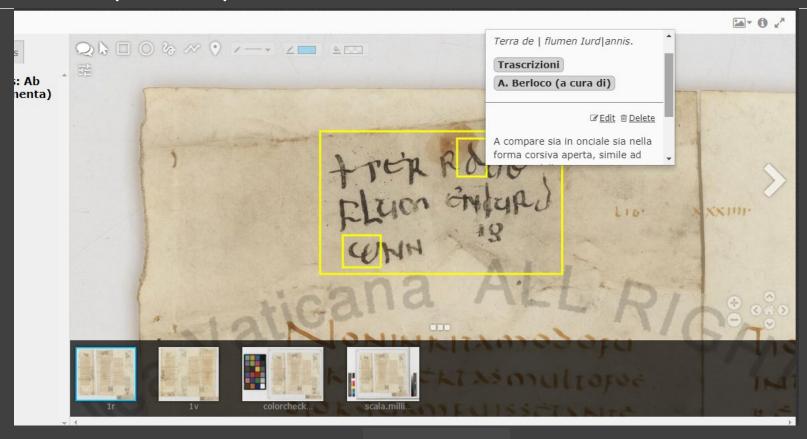
#### Contribution from this project: polygonal annotation

Urb.lat.491, f. 1r (sec. XV med.), e.g. a free-form with putti



### Contribution from this project: enclaves of annotations

### e.g. Vat.lat.10696 (sec. IV-V)







The ability to create right-to-left, left-to-right, vertical, and multi-directional annotations in order to respond to various linguistic and lay-out needs in the corpus of manuscripts to be analyzed

Support for left-to-right, right-to-left, and vertical navigation of manuscript materials in the viewing windows of *Mirador* 

A stable platform for the creation of annotations on complex regions of interest

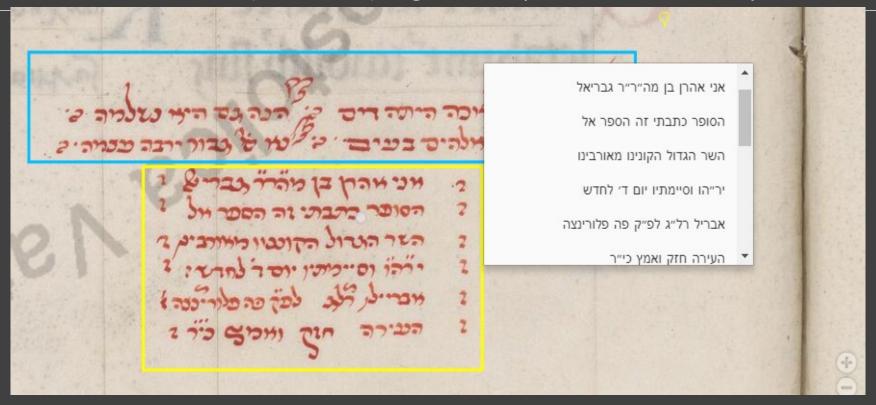
A stable platform for the editing and deleting of existing annotations

The ability to credit an author or group of authors for each annotation

Ability to provide layout formats within the body of an annotation to support footnotes and bibliographical citations

Support for all Unicode characters in the body of the annotations

Urb.lat.9, f. 192v (sec. XV ex.), e.g. transcription of Hebrew colophon.





## Web Thematic Pathways of Medieval Manuscripts

Thematic Pathways

Courses in Paleography (Greek and Latin, from antiquity to the Renaissance)

Latin Classics: the evolution and transmission of texts of specific works

Vatican Palimpsests: Digital Recovery of Erased Identities

The humanist prince's library: Federico da Montefeltro and his manuscripts

**About us** 

#### About us

Curators: Marco Buonocore, Maria Gabriella Critelli, Timoty Janz, Andras Nemeth, Ambrogio M. Piazzoni

Editors: Anna Berloco, Ilaria Maggiulli, Lola Massolo, Eva Ponzi, Domenico Surace

Project Management: Benjamin Albritton, Paola Manoni

IT management: Erin Fahy, Gary Geisler, Domenico Izzo, Sean Martin, Riccardo Moroni, Jack Reed

Coordinaton (editors): Anna Berloco

Transalations: sr Maria Panagia Miola

#### Copyright © Vatican Library

All rights reserved. The contents of this site are protected by copyright. Neither the text nor the images may be reproduced, in any form, without the authorisation of the Vatican Library, 00120, Vatican City.

In partnership with



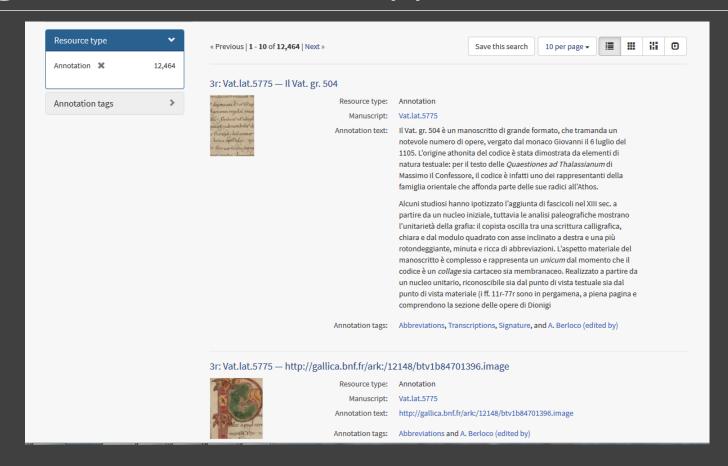
Project supported by

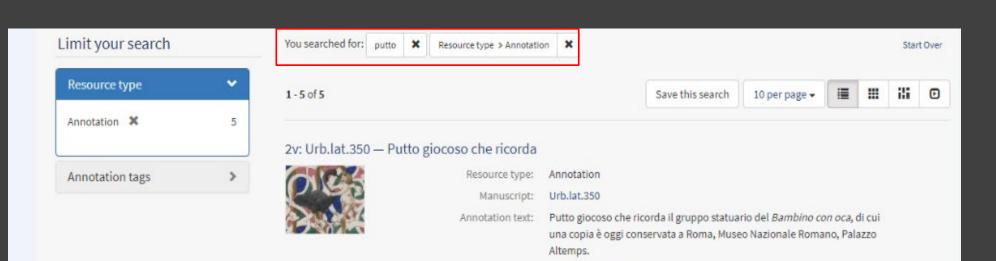


### Spotlight – item page (descriptive metadata)

#### MANUSCRIPT INFORMATION Resource type: Manuscript Arch.Cap.S.Pietro. Shelfmark: Arch.Cap.S.Pietro.C.132 Biblioteca Apostolica Vaticana sec. XIV ex Beginning date: Ending date: 1400 Country: Italia Region: Italia settentrionale Place: Padova (?) Support: membr. Extent: III. 339. I More details \* PARTS OF THIS MANUSCRIPT 1v Epistula ad Paulinum View details 339r Epitaphium Antenoris View details 2r-106v Livius, Titus, Decas III (libri XXI-XXX) View details 107r-191v Livius, Titus, Decas IV (XXXI-LX) View details 193r-338v Livius, Titus, Decas I (I-V) View details

# Spotlight – resource type: annotation







cf. Urb.lat.1, f. 108r, pagina di incipit





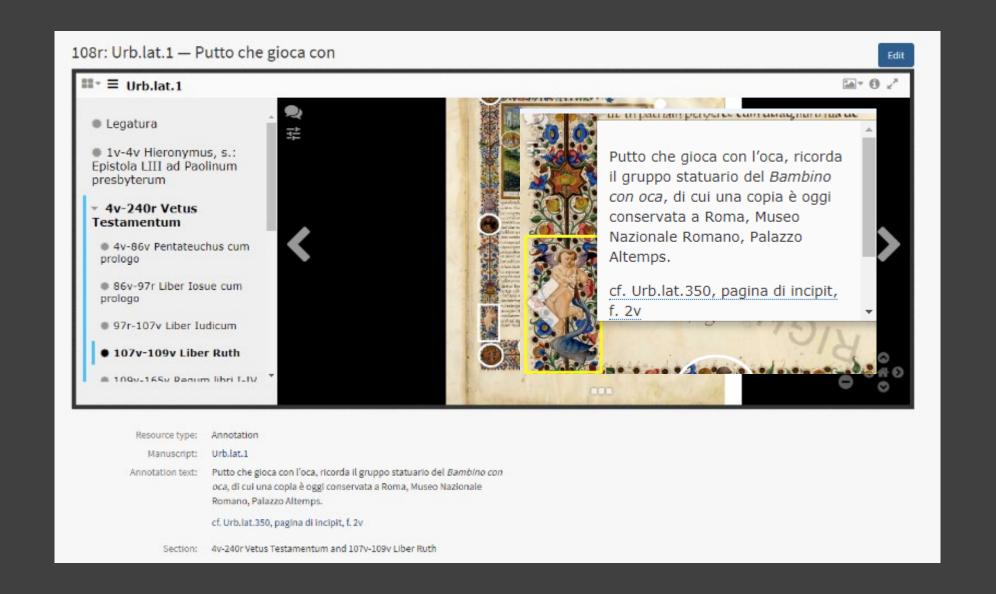
Resource type: Annotation

Manuscript: Urb.lat.365

Annotation text: Iniziale G di Già era dritta, all'incipit di Inferno XXVII, a bianchi girari su

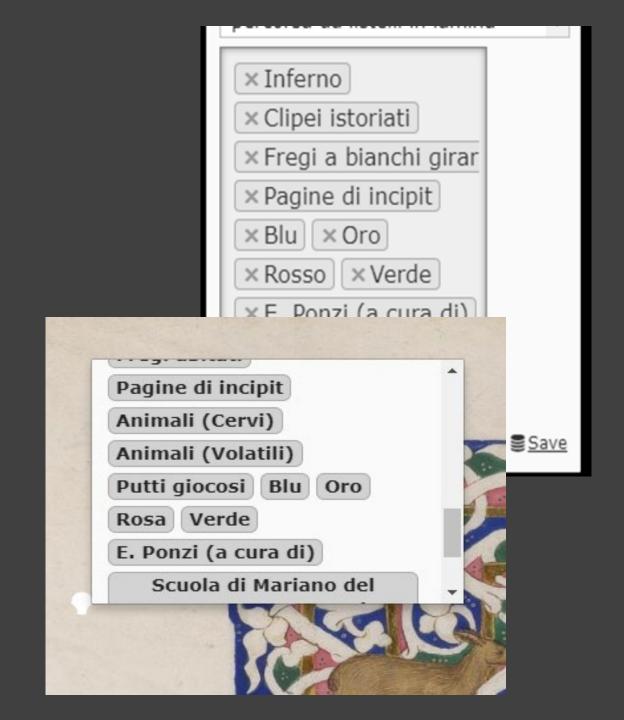
fondo policromo e con corpo in foglia d'oro, abitata da un putto

musicante.



## Annotation tags

- ► A. Berloco 1,817
- Abbreviations 241
- Achates 6
- Actaeon 2
- Adam 8
- Adrastus 1
- Adultery 1
- Aegisthus 6
- Aeneas 58
- Agamemnon 5
- Agesilaus 2
- Alcmene 1
- Alecto 2
- Aletes 1
- Amphytrion 2
- Anchises 8
- Andromache 2
- Angels 29
- Angels bearing a coat of arms 5
- ▶ Animals 372
- ▶ Anne 2
- Antigone 6
- Antiporta 37
- Apollo 2
- Arches 2
- Arethusa 1
- Argia 2
- Argos 9
- Armigers 19
- Arms 68
- Arrows 2
- Artemidora 1
- Ascanius 8
- · Astronomical diagrams 1





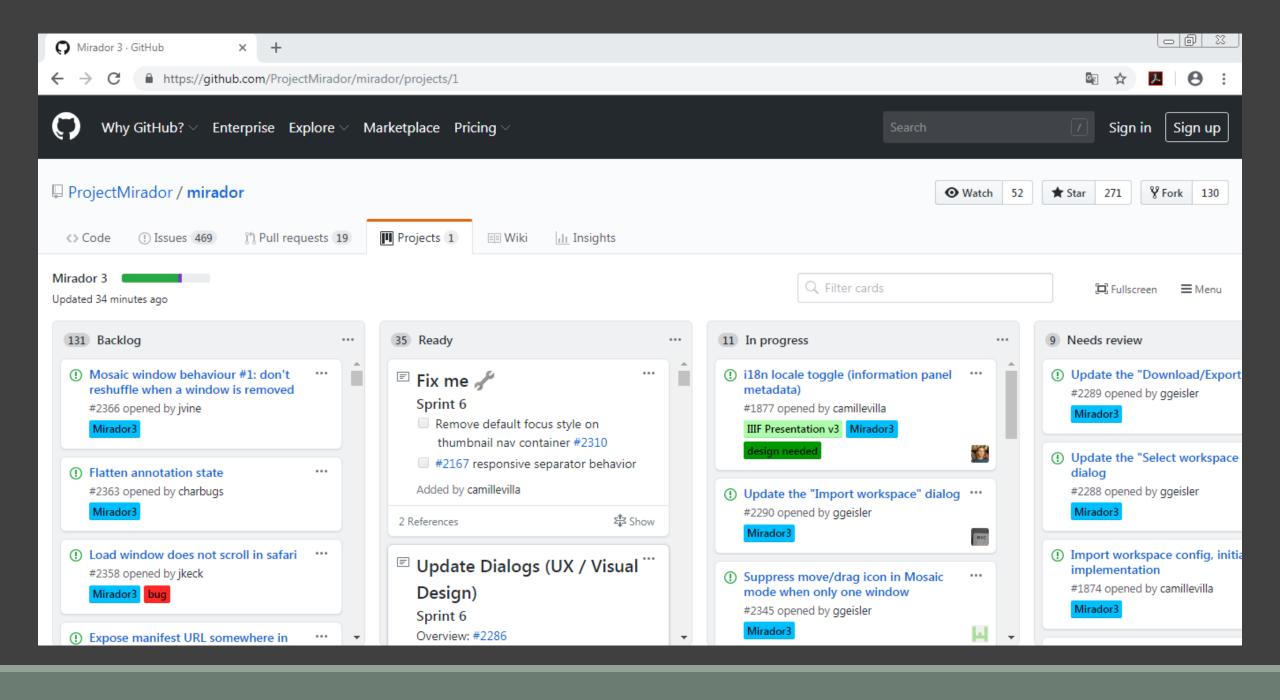
# Try It and Get Involved

http://projectmirador.org/

http://github.com/projectmirador

https://github.com/ProjectMirador/mirador-desktop

mirador-tech@googlegroups.com





Hundreds of adopters
Scores of applications
Billions of digital objects
Revolutionary promise

THANKS FOR YOUR ATTENTION

manoni@vatlib.it