

# Getty



## TECHNICIAN TRAINING FOR THE CONSERVATION OF MOSAICS

PART 1  
THE CONSERVATION OF IN SITU MOSAICS

### Introduction to mosaics



Livia Alberti, Ermanno Carbonara, Thomas Roby



# Mosaic

A mosaic is a decorative surface finishing technique used on buildings: pavements, walls, pools, columns and other architectural elements.

It is made by inserting elements made of hard materials into a soft layer that holds them in place as it sets.



Ermanno Carbonara 2010 © J. Paul Getty Trust

Roman house



Ermanno Carbonara 2011 © J. Paul Getty Trust

Byzantine basilica



Elvia Alberti 2006 © J. Paul Getty Trust

Roman thermal baths

Decoration of floors of a building



Livia Alberti 2004 © J. Paul Getty Trust

Basins



Livia Alberti 2007 © J. Paul Getty Trust

Steps



Sebastian Godts 2010 © J. Paul Getty Trust

Decorative surface of architectural elements



Livia Alberti 2007 © J. Paul Getty Trust



Ermanno Carbonara © 2011 Ermanno Carbonara

Columns



LuVia Art 2008

Seat



Ermanno Carbonara © 2011 Ermanno Carbonara



Ermanno Carbonara 2008 © J. Paul Getty Trust

Tomb

# Types of ancient mosaic pavements

# OPUS TESSELLATUM



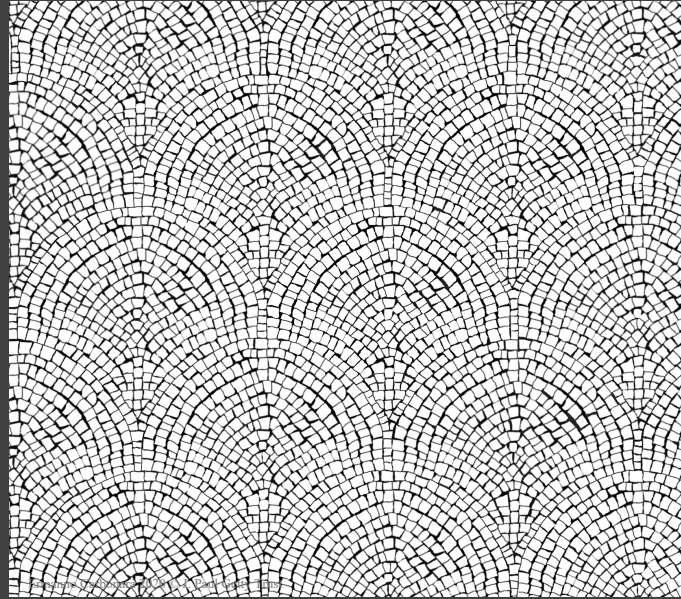
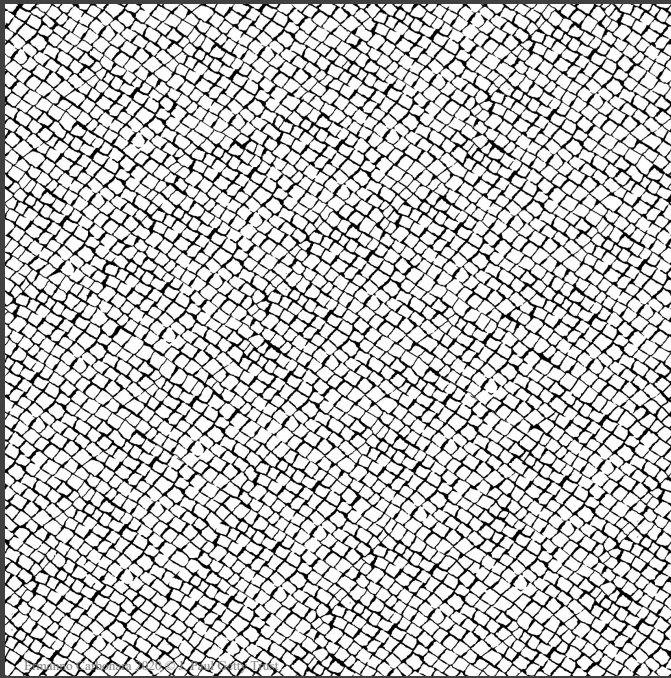
Erva Alberti 2011 © J. Paul Getty Trust



Emanno Carbonara © 2010 J. Paul Getty Trust

# OPUS TESSELLATUM

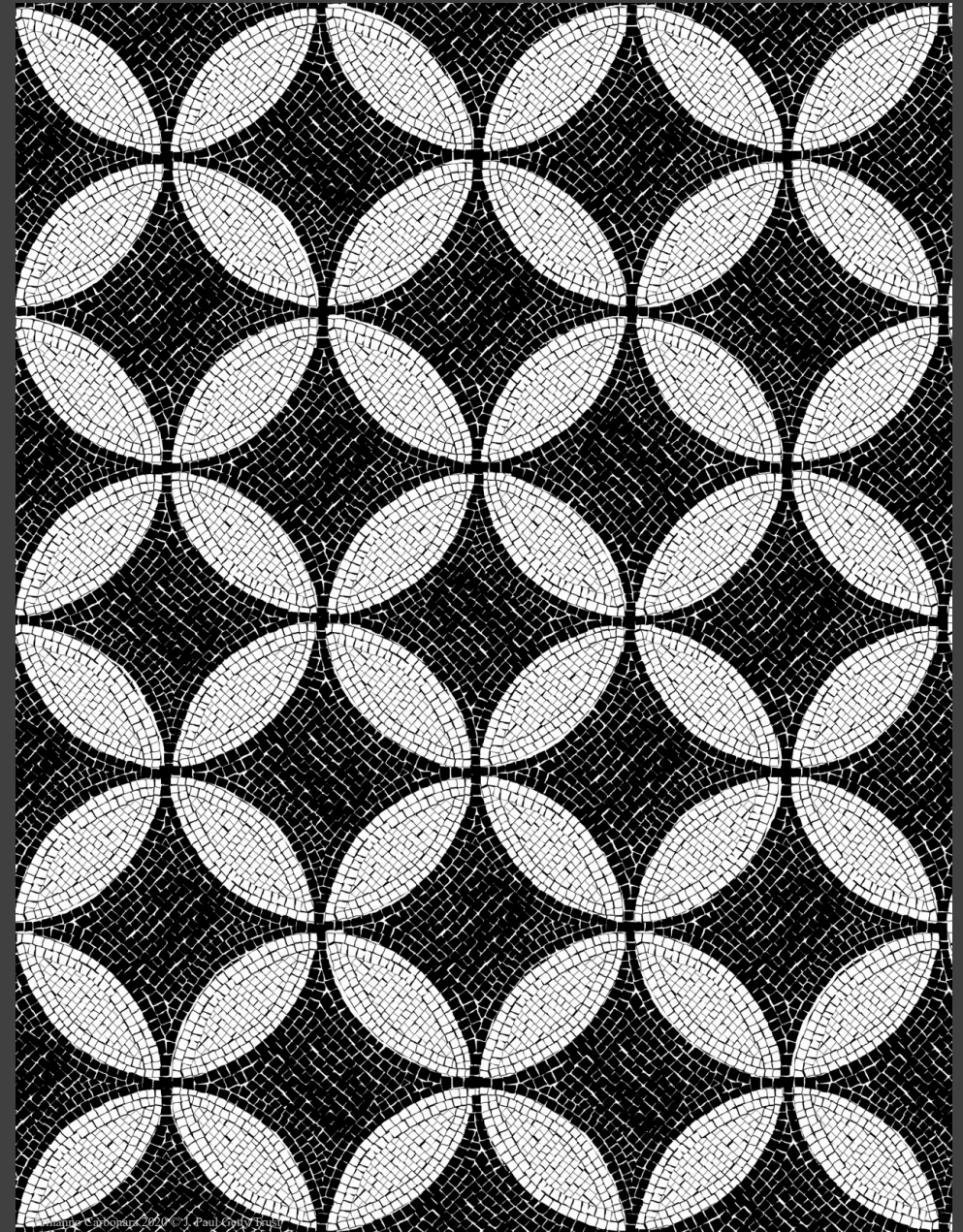
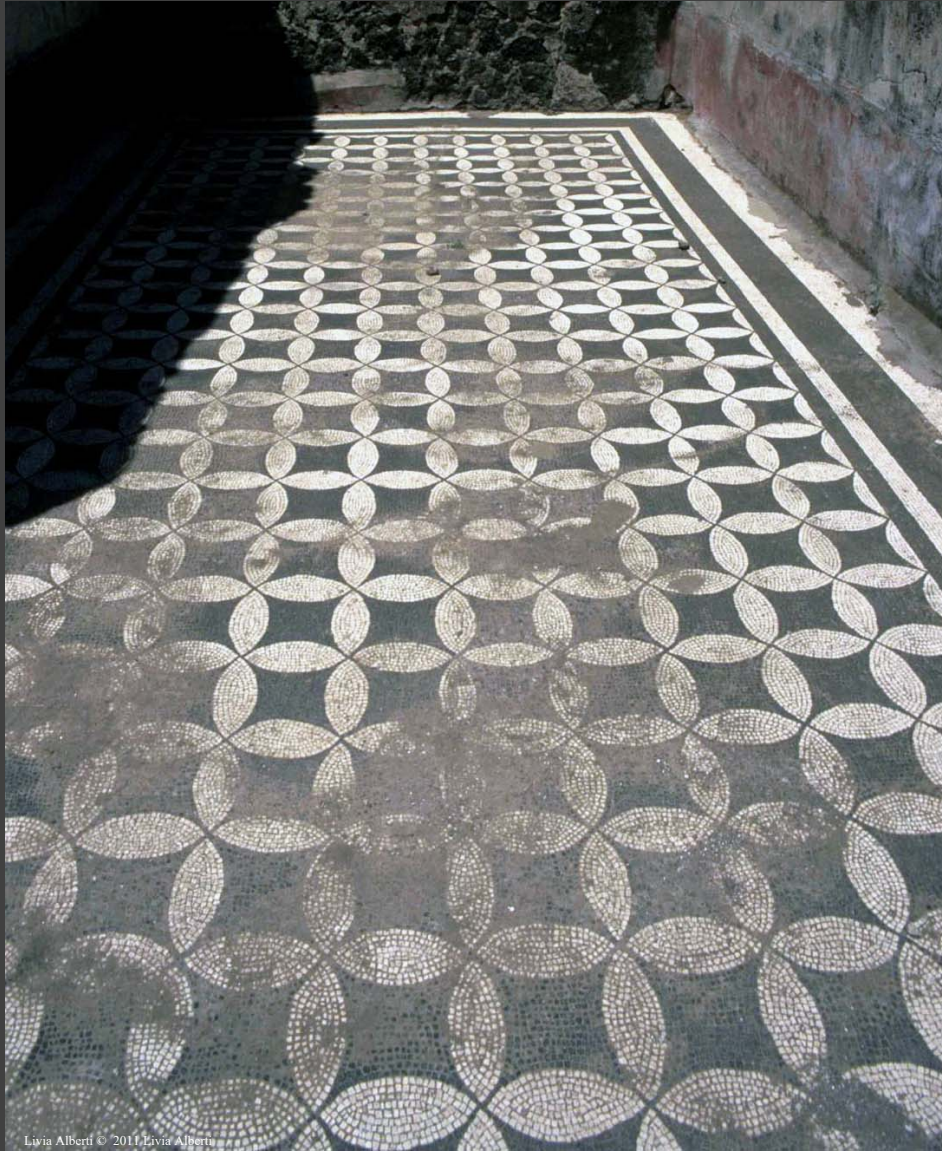
## Monochrome





# OPUS TESSELLATUM

Bi-chrome, geometric

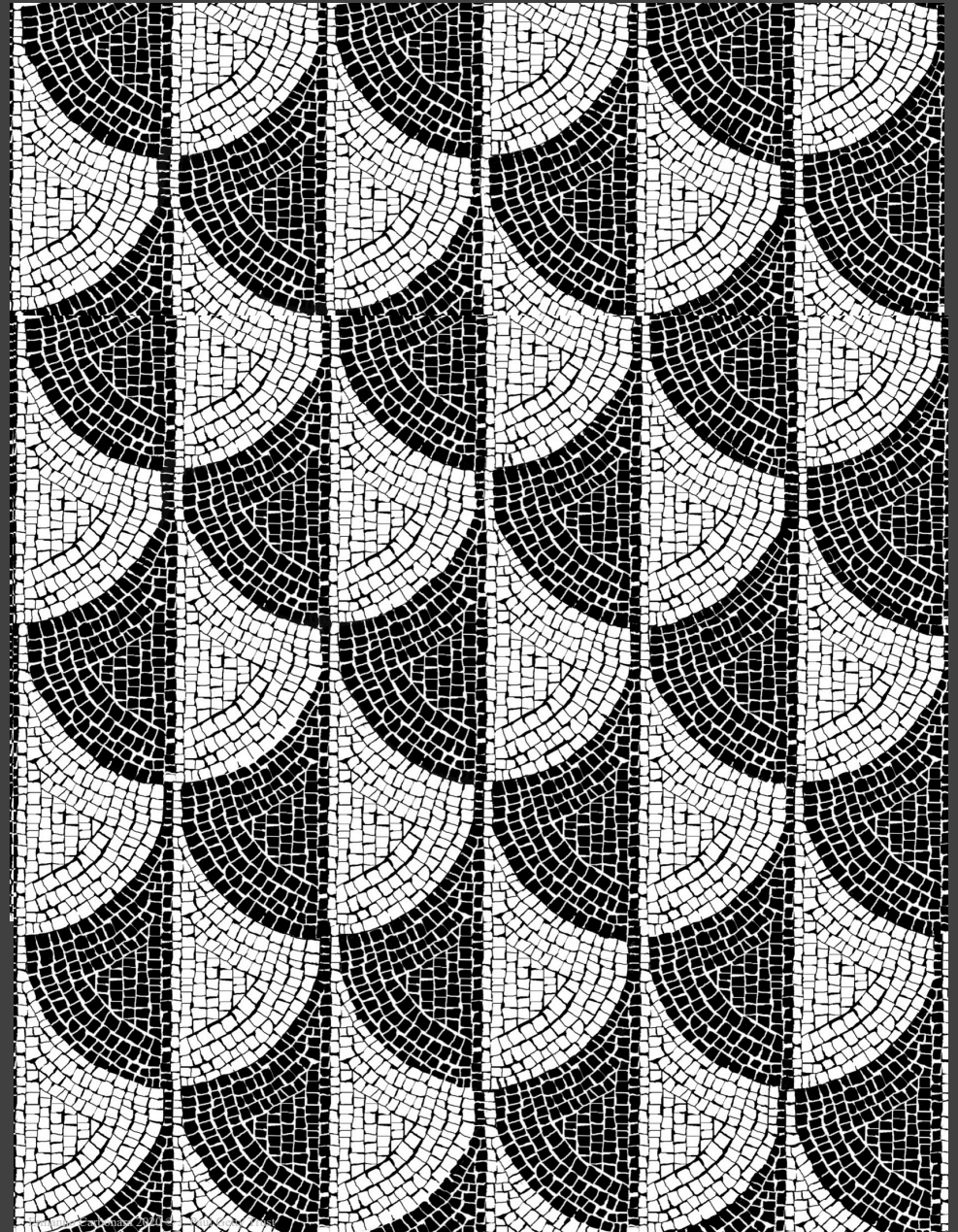


Livia Alberti © 2011 Livia Alberti

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# OPUS TESSELLATUM

## Bi-chrome, geometric



Livia Alberti © 2005 Livia Alberti

# OPUS TESSELLATUM

Bi-chrome, figurative



Livia Alberti © 2011 Livia Alberti

# OPUS TESSELLATUM

Polychrome, geometric



Ermanno Carbonara 2010 © J. Paul Getty Trust

Ermanno Carbonara 2010 © J. Paul Getty Trust

# OPUS TESSELLATUM

Polychrome, figurative



Livia Alberti 2011 © J. Paul Getty Trust



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# OPUS TESSELLATUM

Polychrome, figurative and geometric

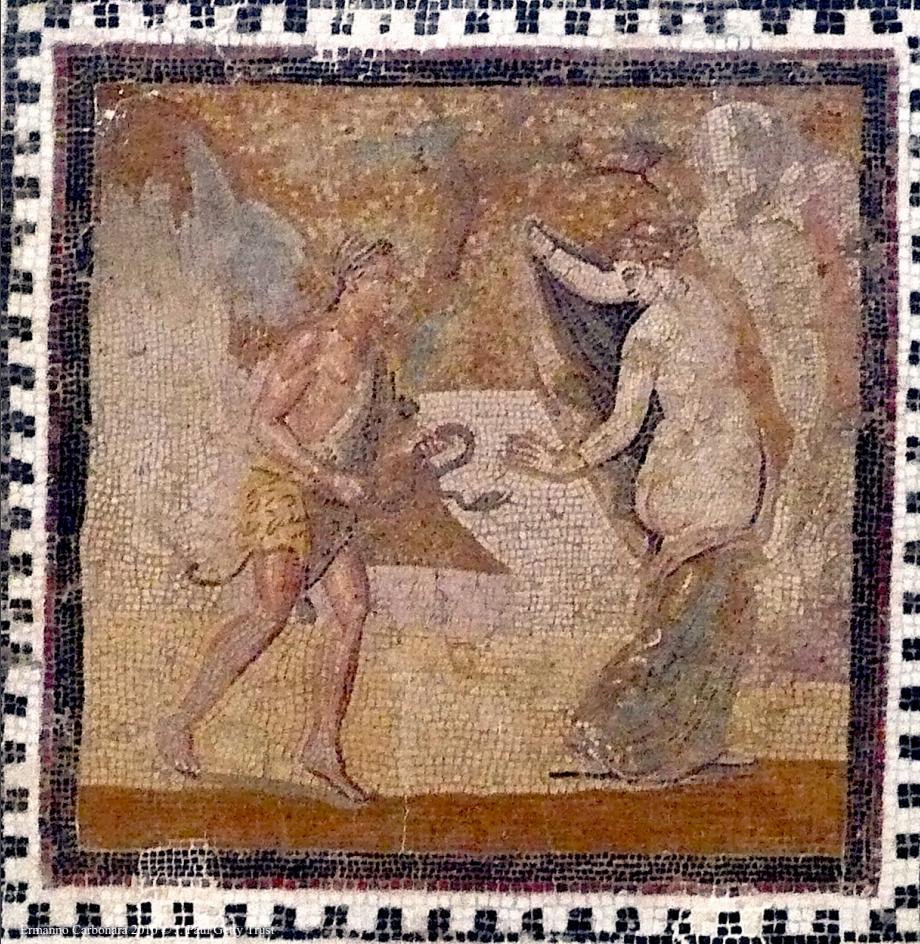


Ermanno Carbonara 2010 © J. Paul Getty Trust



Ermanno Carbonara 2010 © J. Paul Getty Trust

# OPUS VERMICULATUM

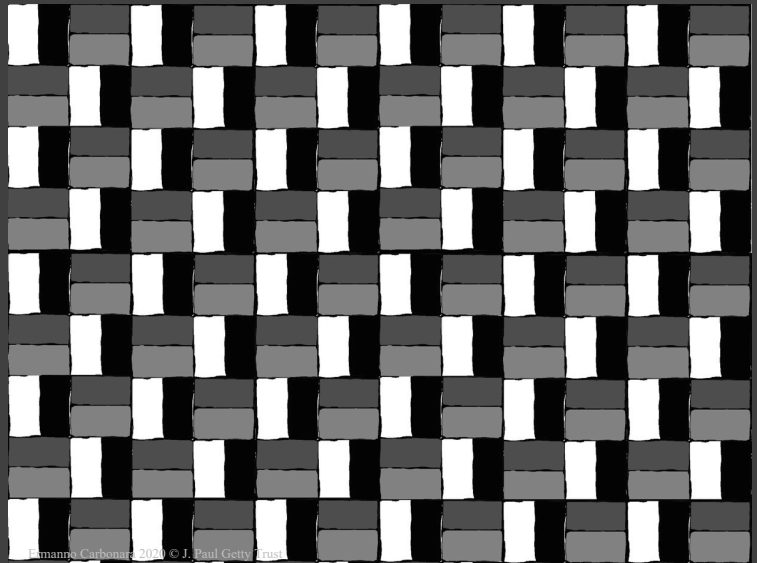


Livia Alberti 2011 © J. Paul Getty Trust

# PSEUDO-FIGLINUM



Livia Alberti 2005 © J. Paul Getty Trust



Manuela Carbonara 2010 © J. Paul Getty Trust



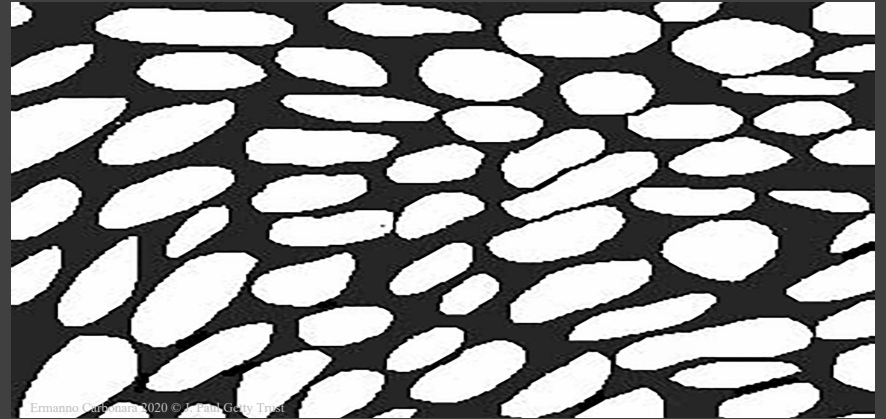
Livia Alberti 2011 © J. Paul Getty Trust



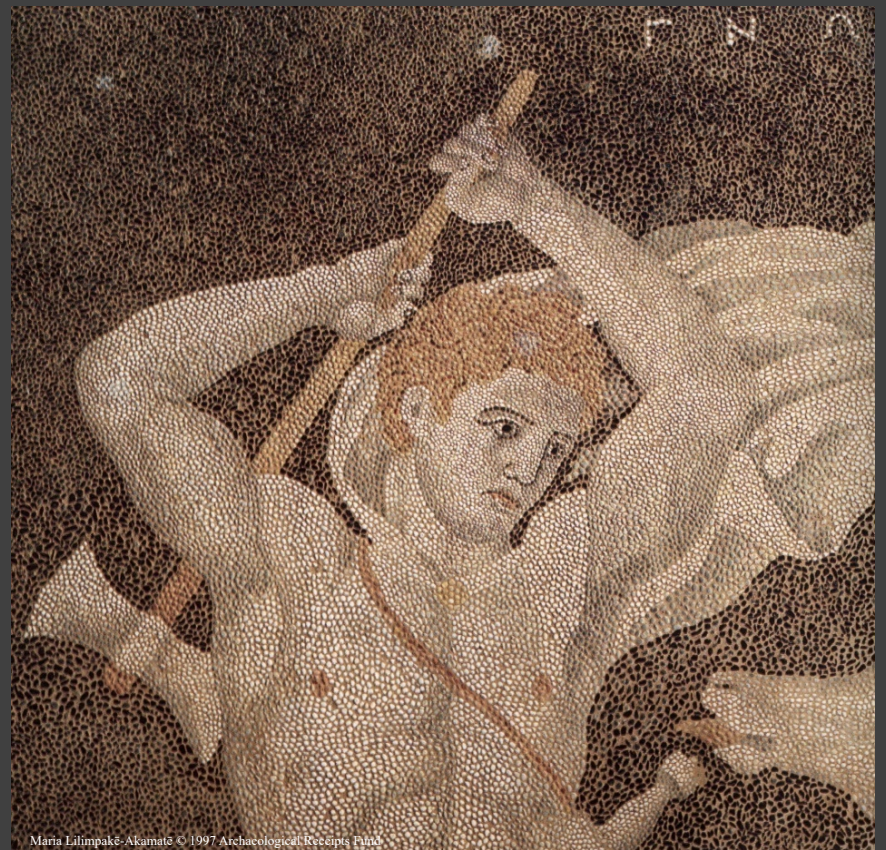
# PEBBLE MOSAIC



Livia Alberti © 2005 Livia Alberti



Ermanno Capponi © 2020 © J. Paul Getty Trust

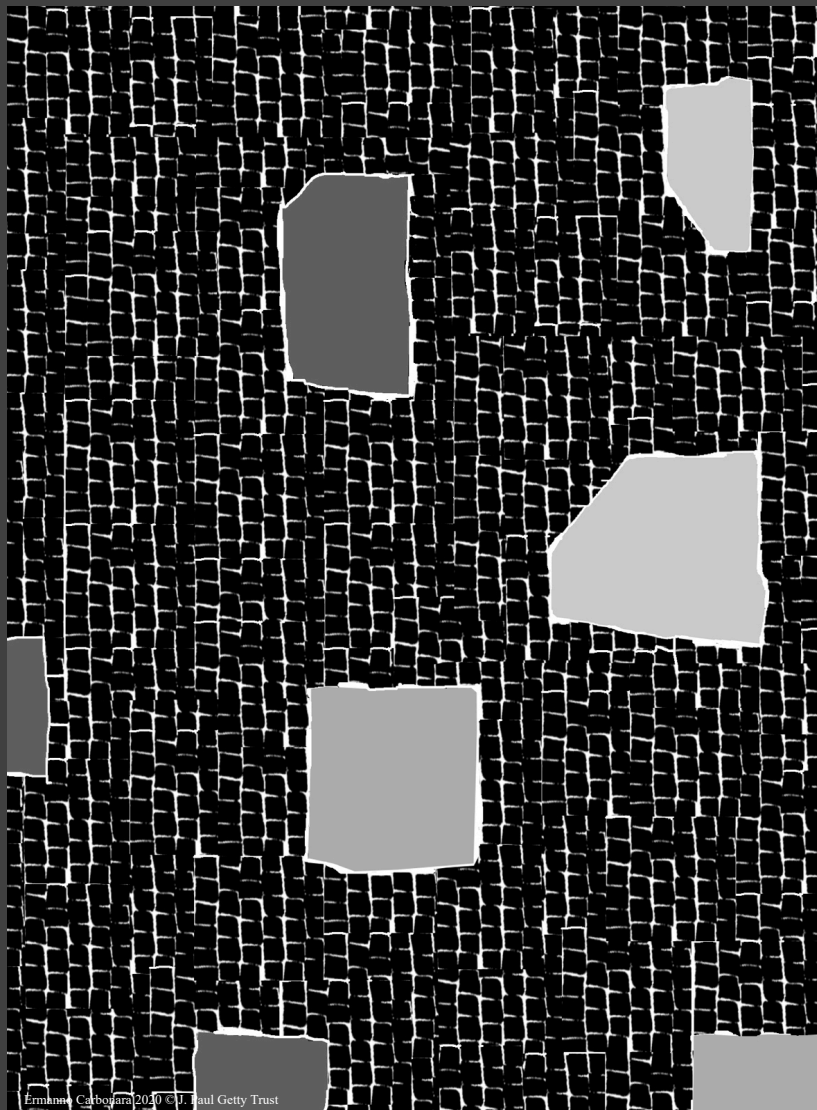


Maria Lilimpaké-Akamaté © 1997 Archaeological Receipts Fund

# OPUS SCUTULATUM



Thomas Roby 2004 © J. Paul Getty Trust

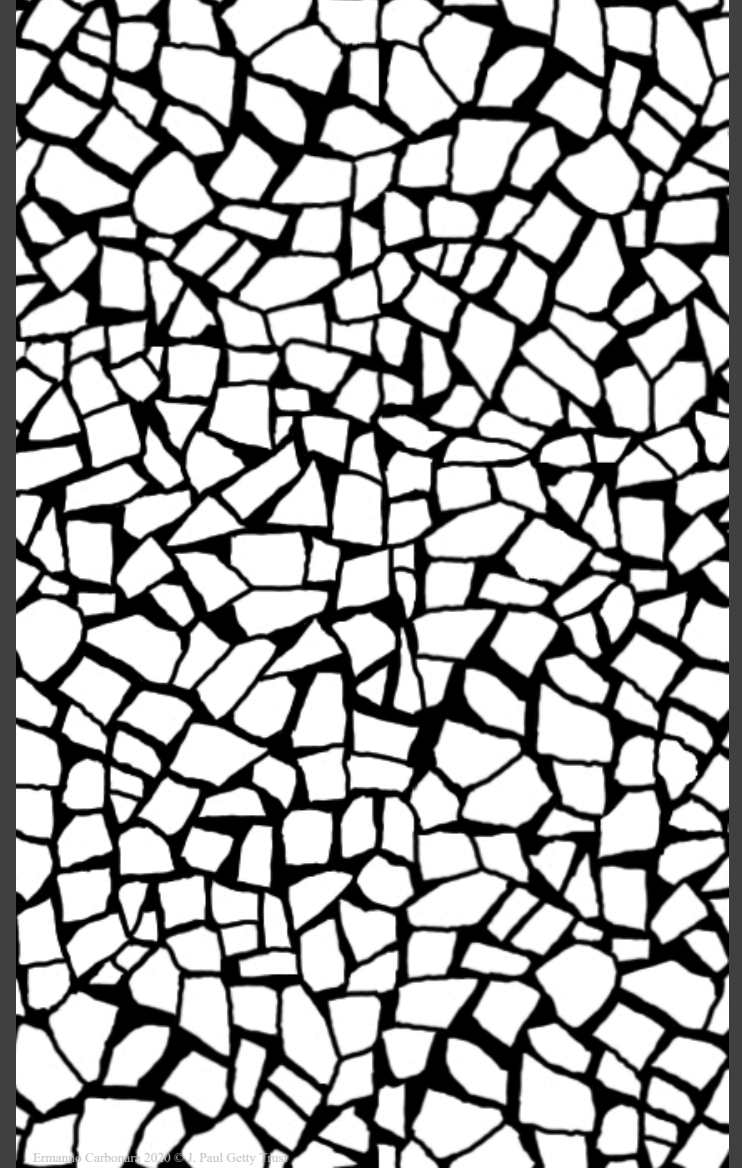


Ermanno Carrogara 2010 © J. Paul Getty Trust

# OPUS SEGMENTATUM



Thomas Roby 2004 © J. Paul Getty Trust



Ermano Carbonari 2000 © J. Paul Getty Trust

# OPUS SECTILE



Livia Alberti 2006 © J. Paul Getty Trust

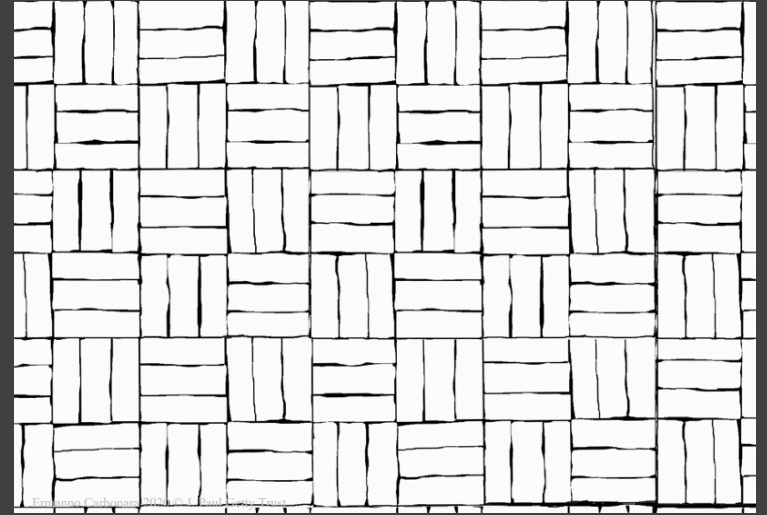


Livia Alberti 2009 © J. Paul Getty Trust

# OPUS FIGLINUM



Ermano Carbonara 2012 © J. Paul Getty Trust



Ermano Carbonara 2012 © J. Paul Getty Trust

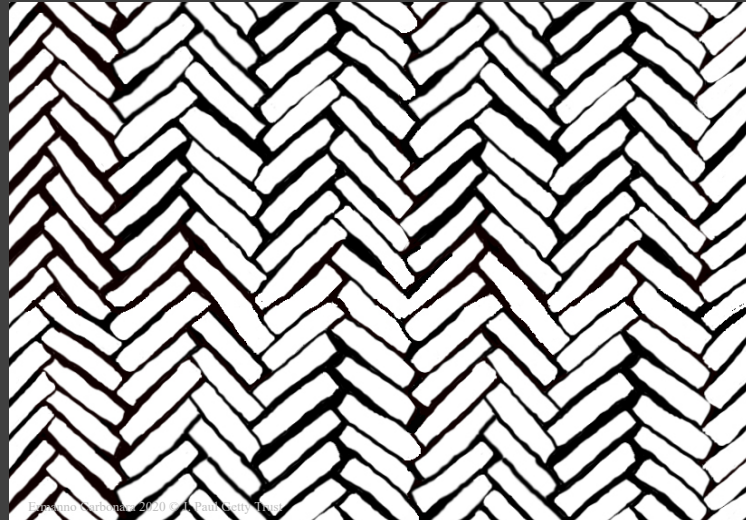


Livia Alberti 2004 © J. Paul Getty Trust

# OPUS SPICATUM



Ermanno Carbonara © 2013 Ermanno Carbonara



Ermanno Carbonara © 2013 Ermanno Carbonara

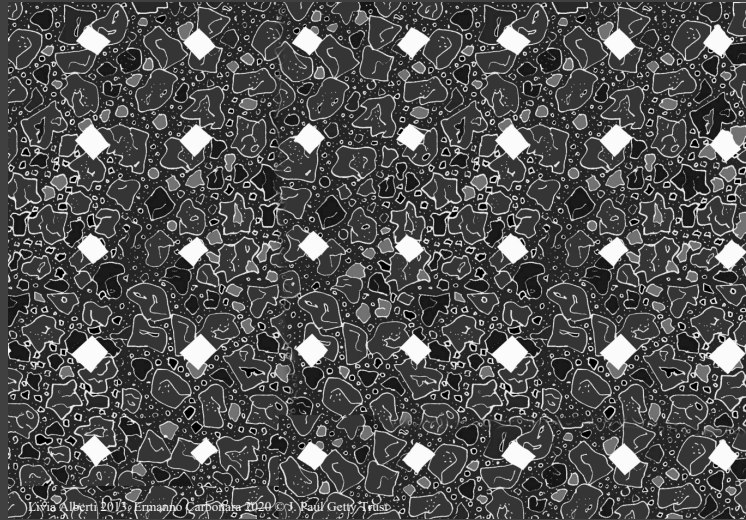


Livia Alberici 2011 © J. Paul Getty Trust

# OPUS SIGNINUM



Livia Alberti 2006 © J. Paul Getty Trust

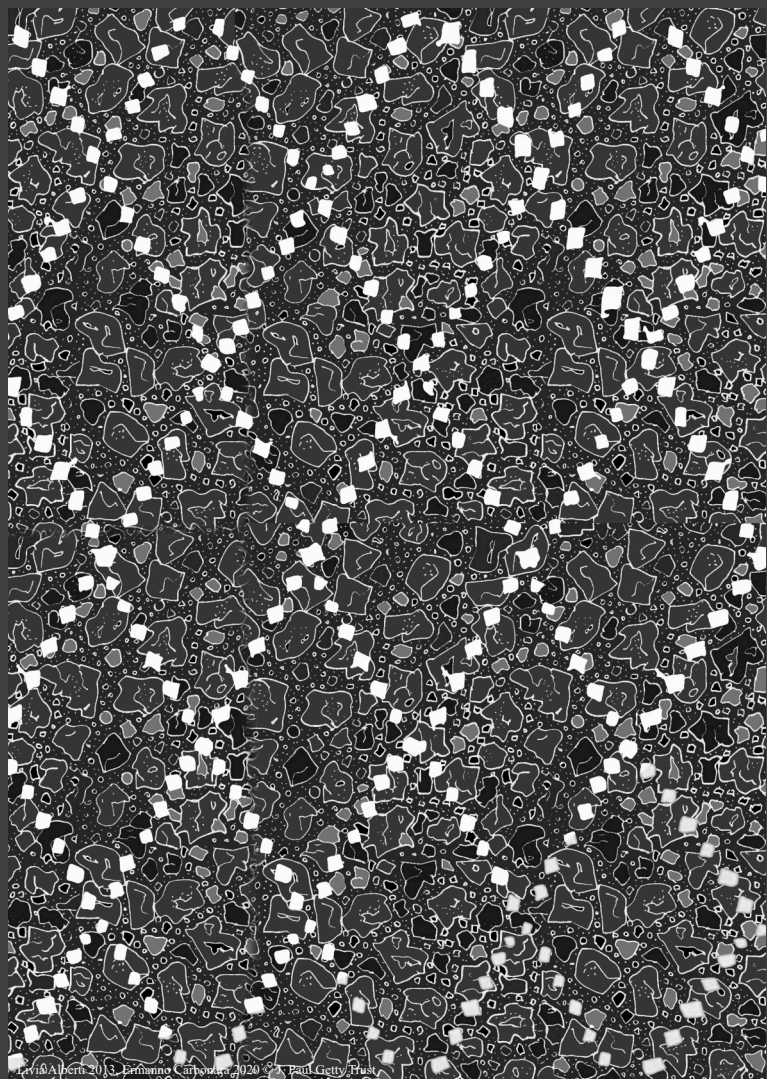


Livia Alberti 2013; Emanuele Carboni 2020 © J. Paul Getty Trust



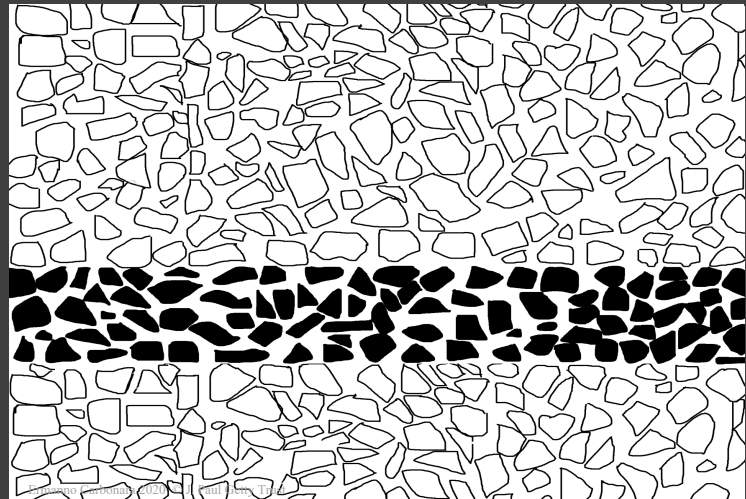
Livia Alberti 2006 © J. Paul Getty Trust

# OPUS SIGNINUM



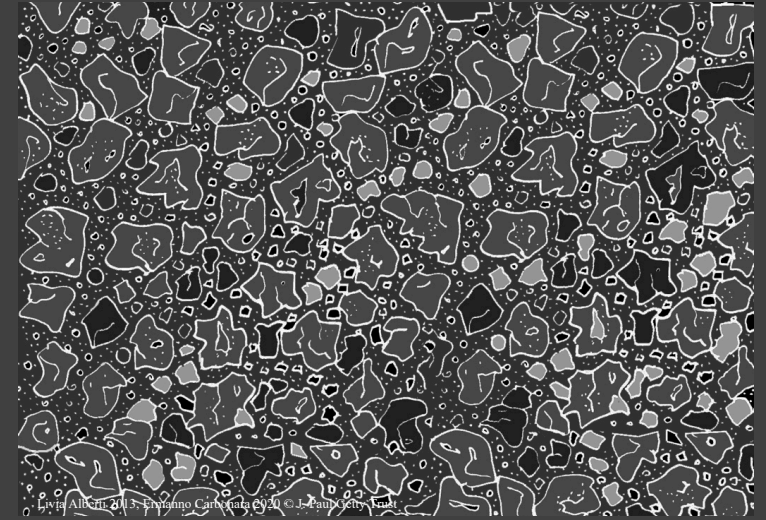


# CHIP MOSAIC



# COCCIOPESTO

(lime mortar mixed with ceramic fragments)



# Types of ancient mosaic pavements

|  |   |            |
|--|---|------------|
| OPUS TESSELLATUM                                       | → | monochrome |
| OPUS VERMICULATUM                                      |   | bi-chrome  |
| OPUS PSEUDO-FIGLINUM                                   |   | polychrome |
| PEBBLE MOSAIC  |   | geometric  |
| OPUS SCUTULATUM  |   | figurative |
| OPUS SEGMENTATUM                                       |   |            |
| OPUS SECTILE   |   |            |
| OPUS FIGLINUM  |   |            |
| OPUS SPICATUM  |   |            |
| OPUS SIGNINUM  |   |            |
| CHIP MOSAIC  |   |            |
| COCCIOPESTO (lime mortar mixed with ceramic fragments) |   |            |

# Geometric polychrome mosaic from the Byzantine Period



# Geometric polychrome mosaic from the Islamic Period








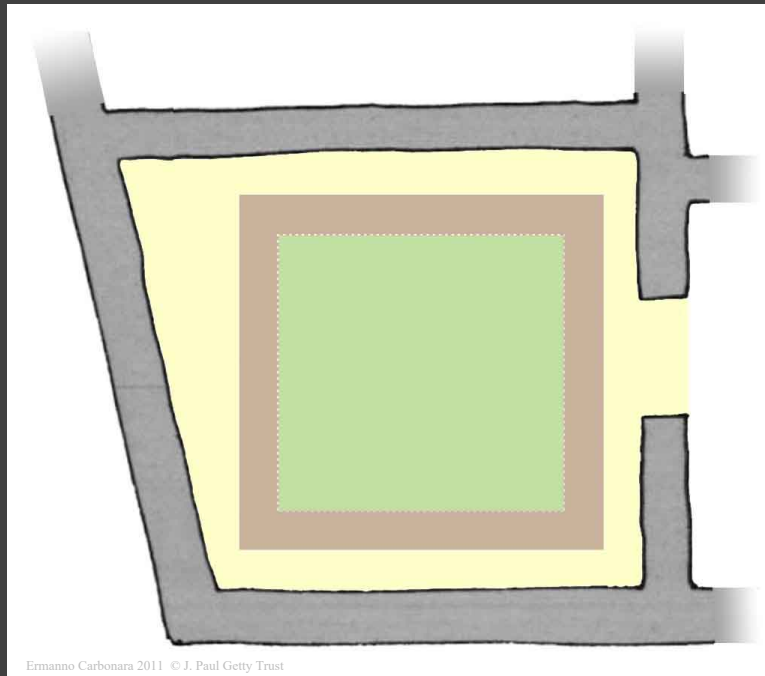
Livia Alberti 2011 © J. Paul Getty Trust



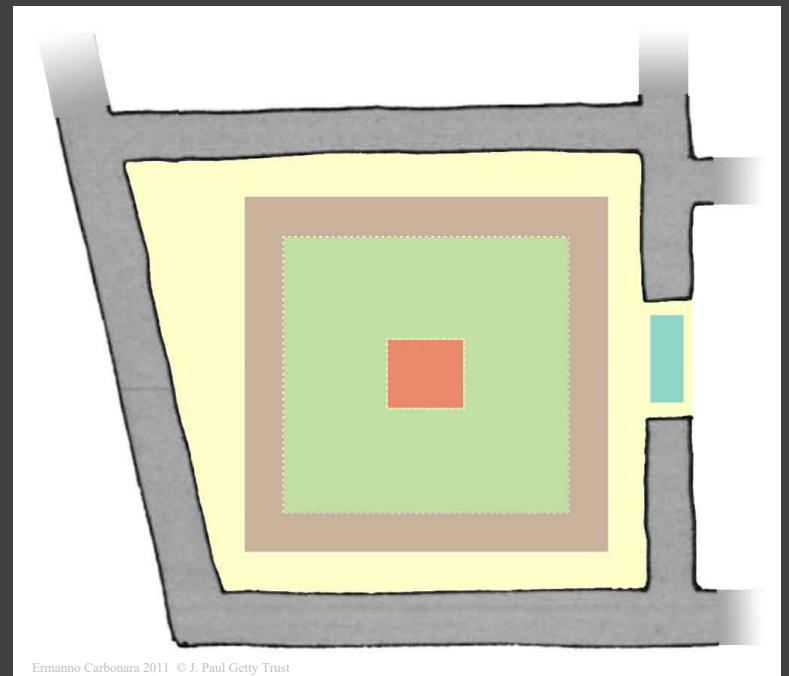
Livia Alberti 2011 © J. Paul Getty Trust

# Main parts of a mosaic pavement

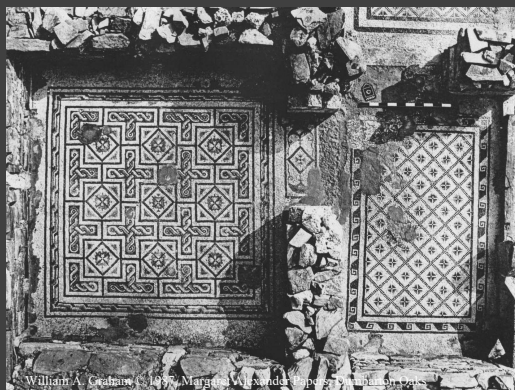
-  Field
-  Frame
-  Connecting Band
-  Threshold
-  Emblema



Ermanno Carbonara 2011 © J. Paul Getty Trust



Ermanno Carbonara 2011 © J. Paul Getty Trust



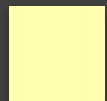
William A. Graham © 1987, Margaret Alexander Papers, Dumbarton Oaks



Field



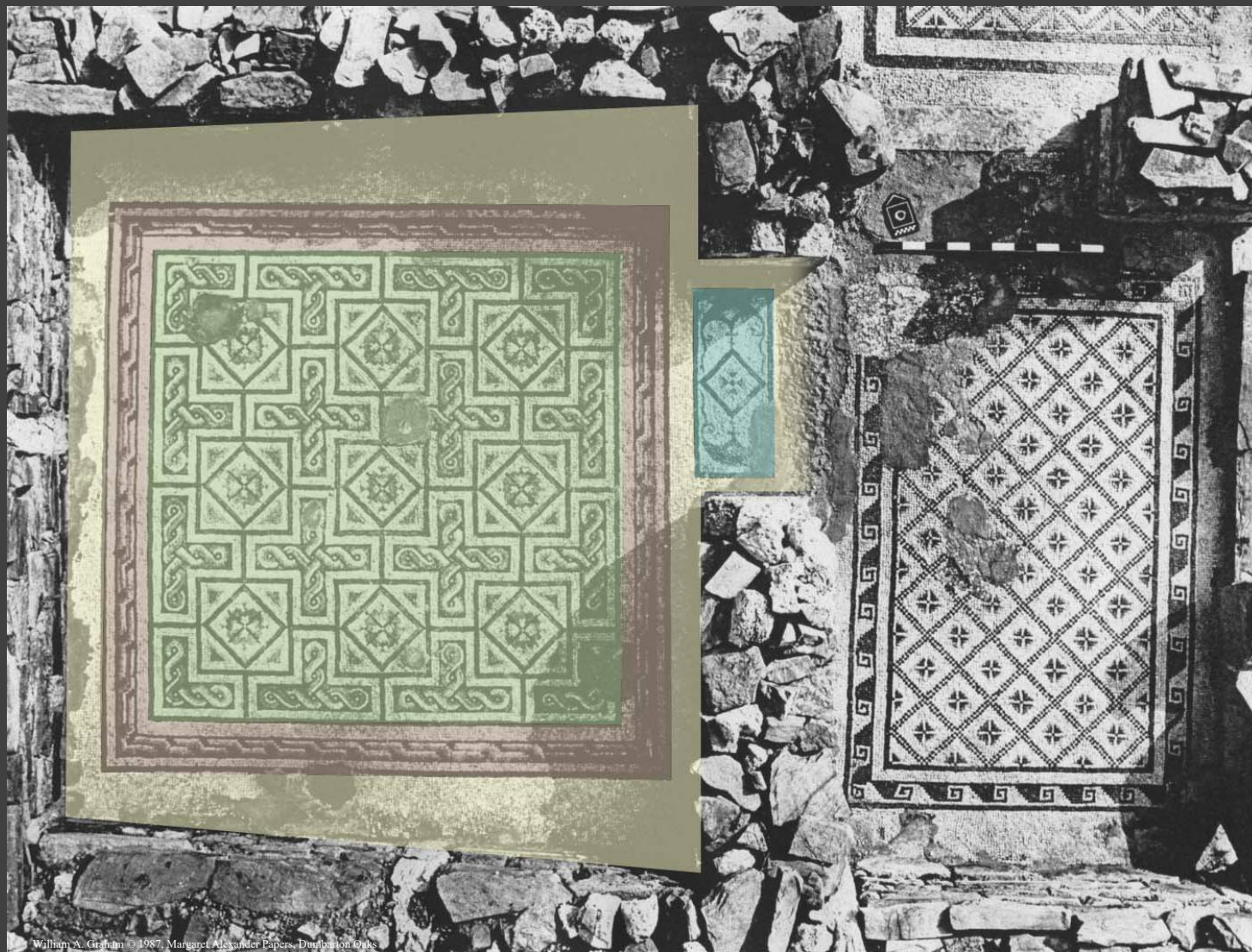
Frame



Connecting  
Band

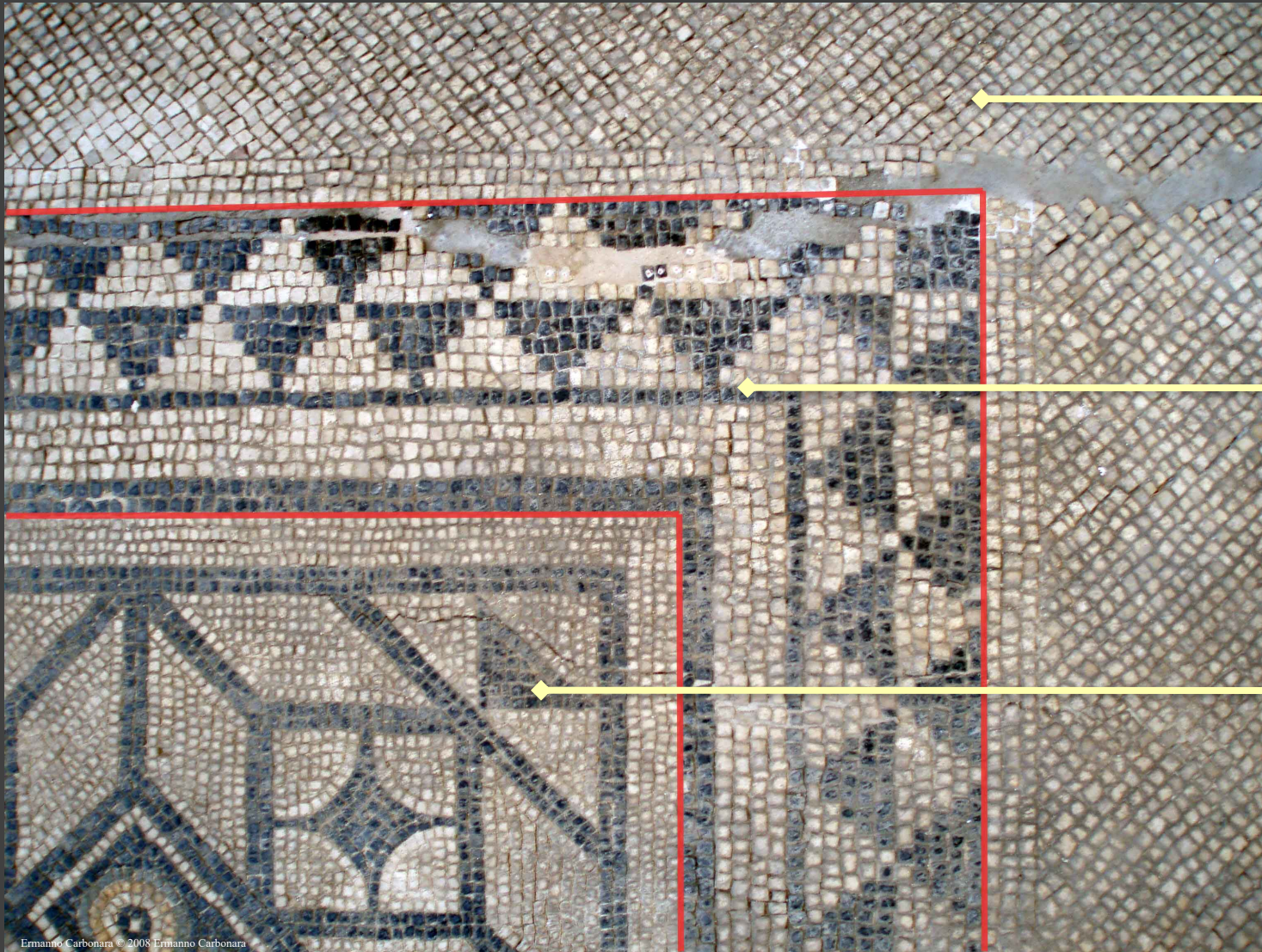


Threshold



William A. Graham © 1987, Margaret Alexander Papers, Dumbarton Oaks





Connecting band

Frame

Field

**Field:** main part at the center of the mosaic, usually quadrangular in shape.

**Frame:** band that surrounds the field.

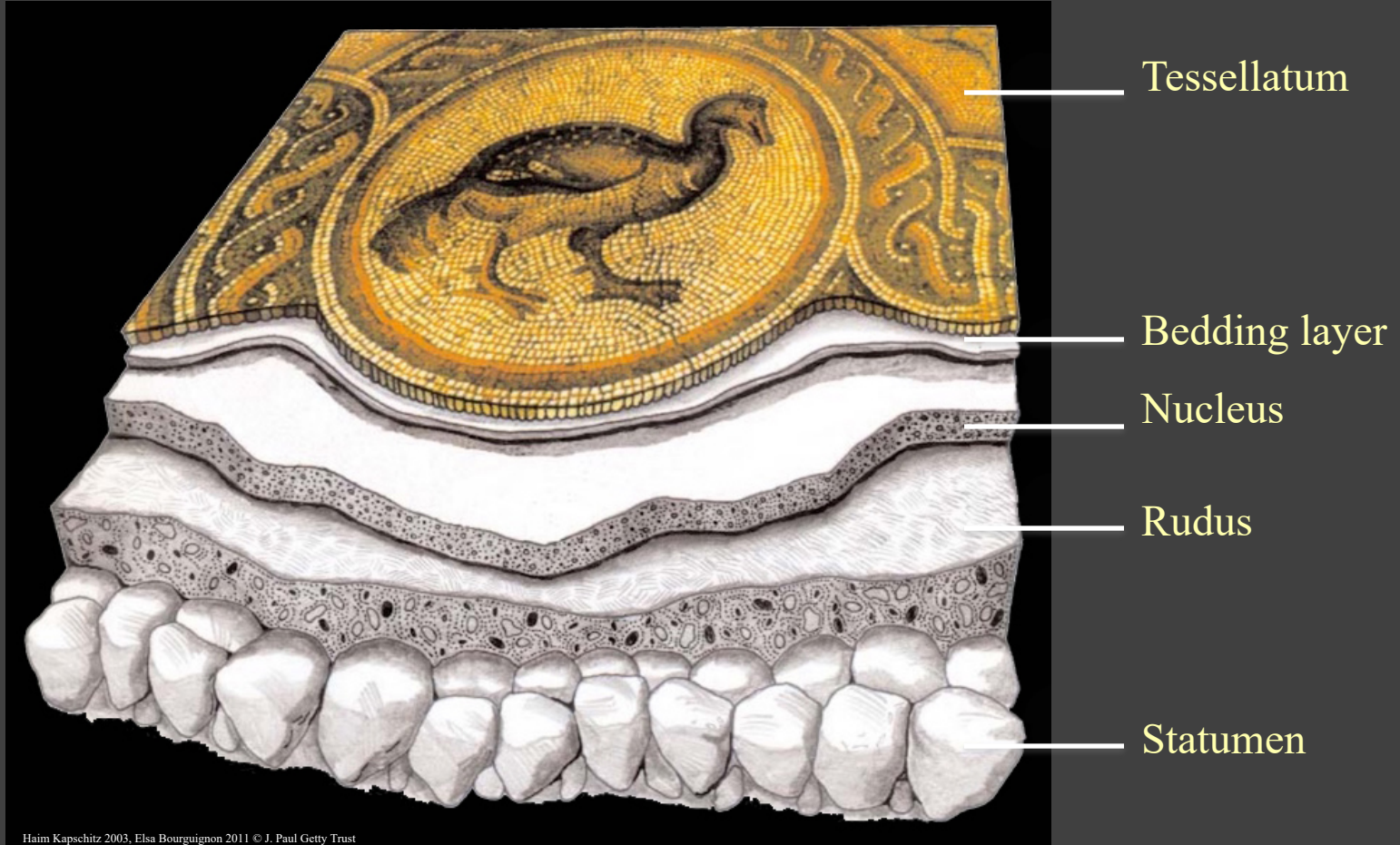
**Connecting band:** part of the mosaic located between the frame of the field and the walls of the room.

**Threshold:** part of the mosaic located in the entrance to a room.

**Emblema:** small panel inserted into the field, generally made separately in opus vermiculatum.

# Mosaic construction technique

# Stratigraphy



Haim Kapschitz 2003, Elsa Bourguignon 2011 © J. Paul Getty Trust

# Examples of stratigraphies



# Bedding layer



# Materials used for tesserae



Ermanno Carbonara © 2008 Ermanno Carbonara

# Marble



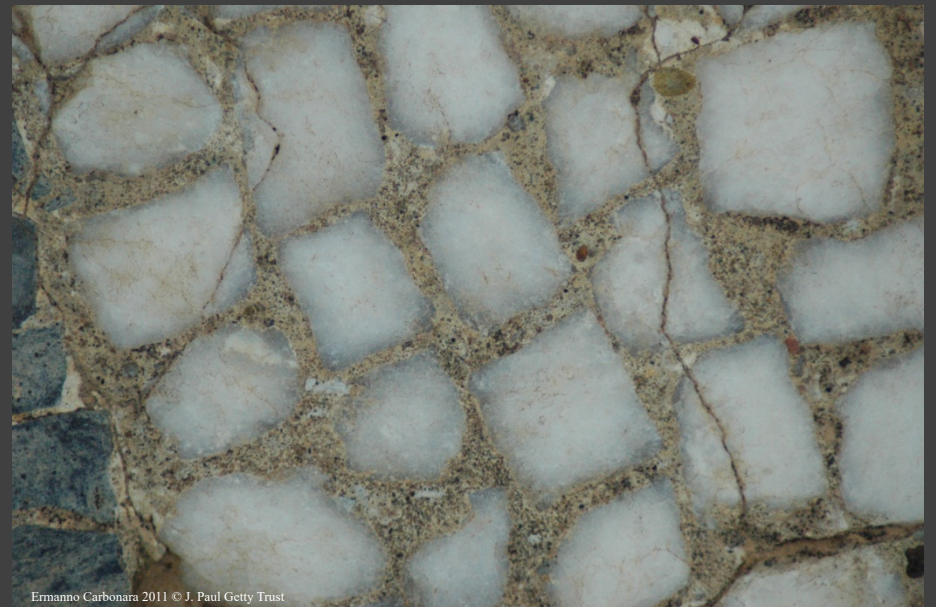
Ermanno Carbonara 2011 © J. Paul Getty Trust



Ermanno Carbonara 2011 © J. Paul Getty Trust



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# Other stones



Ermanno Carbonara 2011 © J. Paul Getty Trust



Ermanno Carbonara 2011 © J. Paul Getty Trust



Ermanno Carbonara 2011 © J. Paul Getty Trust



Ermanno Carbonara 2011 © J. Paul Getty Trust

# Glass



# Ceramic



Ermanno Carbonara © 2011 Ermanno Carbonara



Ermanno Carbonara 2011 © J. Paul Getty Trust

# Cutting tesserae



Livia Alberti © 2012 Livia Alberti



Livia Alberti © 2012 Livia Alberti

# Construction of the tessellatum

## Construction of geometric shapes



Ermanno Carbonara © 2011 Ermanno Carbonara

Ermanno Carbonara © 2011 Ermanno Carbonara

## Background of figurative motifs



World Research © 1998 Franciscan Custody of the Holy Land, Mt. Nebo, and the American Center of Oriental Research, Amman

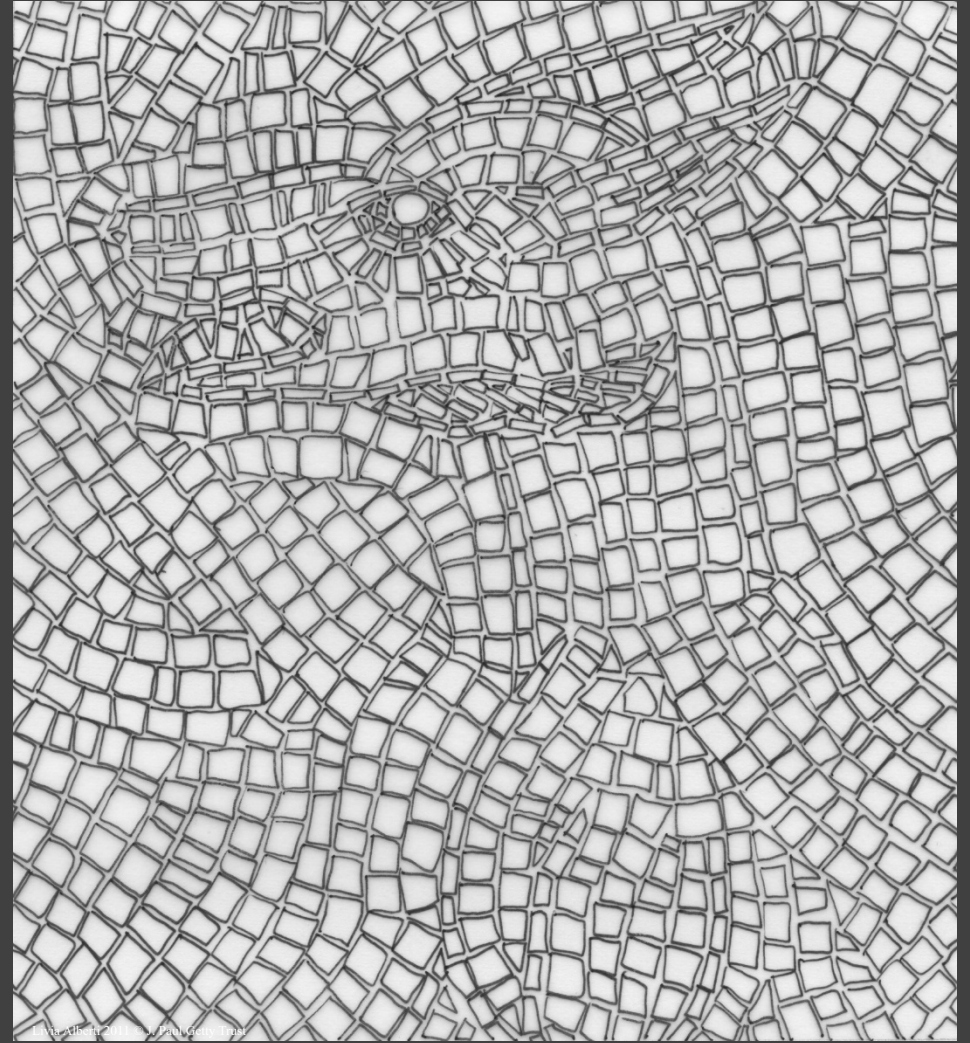


World Research © 1998 Franciscan Custody of the Holy Land, Mt. Nebo, and the American Center of Oriental Research, Amman

# Construction of the tessellatum



Michele Piccinillo, 1998, Franciscan Custody of the Holy Land, Mt. Nebo, and the American Center of Oriental Research, Amman



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MOSAIKON is a partnership of four institutions: the Getty Conservation Institute, the Getty Foundation, ICCROM, and ICCM. The aims of the project are to strengthen the network of professionals concerned with the conservation, restoration, maintenance, and management of mosaic heritage in the southern and eastern Mediterranean region; provide training to a variety of individuals involved in mosaics conservation and, more generally, with the management of archaeological sites and museums with mosaics; work with national and international bodies to provide a more favorable legislative, regulatory, and economic environment for the conservation of mosaics in the Mediterranean; and promote the dissemination and exchange of information.

