



International Course on Stone Conservation SC13

SESSION: Mosaic Conservation

INSTRUCTOR: Thomas Roby

TIME: Friday, 14th June/ 16:30 – 18:00 (1.5 hours)

SESSION OUTLINE

ABSTRACT

As composite structures built of layers of lime mortars, ancient mosaics will deteriorate as other porous materials do, primarily due to the presence of water and the frequency of wetting-drying cycles.

Because of the variety of materials used to construct mosaics and the various construction techniques, mosaic deterioration processes can manifest themselves in different ways and at different rates.

Most of the deterioration and loss of mosaics on archaeological sites is due to lack of planning and post – excavation exposure and neglect, as well as inappropriate modern repair treatments such as using cement and detaching and relaying on support panels of re-enforced concrete.

The past history of interventions on mosaics has led to a current crisis in mosaics conservation, where thousands of lifted mosaics are being lost, some in storage, with or without backing supports, while many others on sites are breaking apart due to oxidized rebar in the support panel. In situ stabilization treatments using compatible lime-based mortars has become more prevalent, and the development of grouting in recent decades has acted as a catalyst to reverse the previous trend of conservation through detachment.

The increasing practice of in situ conservation of mosaics has not prevented the continued loss of mosaics due to insufficient resources, both human and financial, to maintain mosaics exposed on sites. Therefore, reburial of selected mosaics is crucial to preserving ancient mosaic heritage after over a century of excavations. However, for mosaics re-laid in situ on re-enforced concrete, the long-term solution is the removal of the support and relaying the tessellatum layer on new lime mortar preparatory layers.

Modern mosaics can present even more difficult and complex conservation challenges due to a wider variety of non-traditional materials and industrial construction techniques used.

OBJECTIVES

- Understanding the different materials and construction techniques of ancient mosaics.
- Understanding deterioration processes of mosaics and their phenomena.
- Understanding current principles of mosaic conservation as a response to unsuccessful past practice.
- Understanding different structural and surface treatment options for in situ mosaics conservation.
- Understanding the importance of reburial as a preventive conservation option for in situ mosaics.
- Understanding the similarities and differences of modern and ancient mosaic conservation.




CONTENT OUTLINE

- Construction techniques of ancient mosaics (opus tessellatum, opus sectile, etc), including their constituent materials (stone: marble, limestone, sandstone; ceramic; glass; lime mortars).
- Causes of deterioration of mosaics (environmental, human intervention and intrinsic qualities)
- Deterioration phenomena of mosaics both structural and superficial.
- Conservation treatments for in situ mosaics.
- Conservation treatments for detached and re-laid mosaics on sites.
- Modern mosaics and their conservation.

READINGS


 = Essential reading material

 = Available online

- Alberti, Livia and Cetty Muscolino. 2005. "The Conservation of the Mosaics of San Vitale in Ravenna, Italy, 1989-1999: Construction Technique and Treatment Methodology", pp. 169-180, in *Proceedings of VIIIth Conference of the International Committee for the Conservation of Mosaics (ICCM). Wall and Floor Mosaics: Conservation, Maintenance, Presentation*, Thessaloniki 29 October - 3 November 2002, Editor Ch. Bakirtzis, Thessaloniki.
- Bosia, Daniele. 2002. "La tecnica "moderna" del mosaico: Materiali, tecniche e restauri dai mosaici moderni alle interpretazioni decorative degli anni '50 e '60 del Novecento. In *I mosaici: Cultura tecnologia, conservazione: Atti del convegno di studi, Bressanone, 2-5 luglio 2002*. Eds. Guido Biscontin and Guido Driussi. 379-88. Scienza e beni culturali, 18. Marghera-Venezia: Arcadia ricerche.
- Carbonara, Ermanno, Linda Kniffitz, Maria Grazia Marini, Cetty Muscolino and Claudia Tedeschi. 2009. "*Il Parco della Pace a Ravenna. Esperienze di restauro del mosaico contemporaneo*". Tipografia Moderna, Ravenna.
- Demas, Martha. 2004. "Site unseen": The case for reburial of archaeological sites. *Conservation and Management of Archaeological Sites* 6 (3-4): 137-54.
- Henry, A. and J. Stewart (ed.) 2011. *Mortars, Renders and Plasters* (Practical Building Conservation series) Farnham: Ashgate in association with English Heritage.
-  Roby, Thomas, Livia Alberti, Elsa Bourguignon and Ermanno Carbonara. 2011. *Technician Training for the Maintenance of In Situ Mosaics*. Los Angeles, CA: Getty Conservation Institute and Tunis: Institut National du Patrimoine.
http://www.getty.edu/conservation/publications_resources/pdf_publications/pdf/technician_training_2014.pdf
- Roby, Thomas, Livia Alberti, and Aïcha Ben Abed. 2010. A preliminary assessment of mosaic reburials in Tunisia. In *Conservation and the Eastern Mediterranean: Contributions to the Istanbul Congress, 20-24 September 2010*. ed. Christina Rozeik, Ashok Roy and David Saunders. 207-13. London: International Institute for Conservation of Historic and Artistic Works.
- Stewart, John. 2004. Conservation of archaeological mosaic pavements by means of reburial. *Conservation and Management of Archaeological Sites* 6 (3-4): 237-46.

SESSION OUTLINE CONT'D

Stewart, John. 2012. The stabilization and protection of archaeological sites from natural processes, in ICCROM (ed.) *Selected readings from ATHAR (Conservation of Cultural Heritage in the Arab Region): issues in the conservation and management of heritage sites*, 83-91, Sharjah: ICCROM.

 Torraca, Giorgio. 2009. Deterioration of porous materials; Conservation of architectural surfaces. In *Lectures on Materials Science for Architectural Conservation*. 72-109. Los Angeles: Getty Conservation Institute.
http://www.getty.edu/conservation/publications_resources/pdf_publications/pdf/torraca.pdf

Zizola, Chiara. 2008. The legacy of Nora, Sardinia: A project for the conservation, restoration, and maintenance of mosaics. In *Lessons Learned: Reflecting on the Theory and Practice of Mosaic Conservation: Proceedings of the 9th ICCM Conference, Hammamet, Tunisia, November 29-December 3, 2005 = Leçons retenues: Les enseignements tirés des expériences passées dans le domaine de la conservation des mosaïques: Actes de la 9e conférence de l'ICCM, Hammamet, Tunisie, 29 novembre-3 décembre 2005*. ed. Aïcha Ben Abed, Martha Demas and Thomas Roby. 165-73. Los Angeles, California: Getty Conservation Institute.

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