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FROM PALACE TO TOWN

Report on the multidisciplinary project carried out by the Iranian-Italian Joint Archaeological Mission on the Persepolis Terrace (Fars, Iran), 2008-2013

4. Science for Archaeology

edited by

Alireza Askari Chaverdi and Pierfrancesco Callieri

with contributions by

Maria Letizia Amadori, Sara Barcelli, Mohammadamin Emami, Paola Fermo, Marco Galuppi, Marisa Laurenzi Tabasso, Paolo Pallante, Giuliana Raffaelli, Stefano Ridolfi, Thomas Van de Welde

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Cover image: Plane-polarized light Micrograph (50 x) of a brick sample (TAJ10) from Tol-e Ajori (see Fig. 34 at pag. 97).

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info@bradypus.net

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Prefaces

The research activities carried out by the Iranian-Italian Joint Archaeological Mission in Fars on the Persepolis Terrace in the frame of the project "From Palace to Town: An integrated multidisciplinary approach to Persepolis terrace and town" include the application of physical and chemical investigations on the finds coming from the excavations at the two sites of Persepolis West and Bagh-e Firuzi. Archaeometry represents a whole section of the project indeed and corresponds to our expectations for an up-to-date approach to archaeological research from a joint mission. The abundant information obtained through several scientific methodologies and made accessible through a digital publication represents a precious tool for further research in this field, which allows to base our understanding of antiquity on the most recent methodologies of scientific investigation. I congratulate the Iranian-Italian Joint Archaeological Mission in Fars for this excellent result.

Mohammad Hassan Talebian
Deputy, ICHHTO

The results of the research activities of the Joint Iranian-Italian Archaeological Mission in Fars in the area of the Persepolis Terrace represent the most recent advances in our knowledge of a site of fundamental importance for the history of humanity. The Research Centre for Cultural Heritage and Tourism of the Islamic Republic of Iran, under the aegis of which the activities are being carried out on the basis of a Memorandum of Understanding signed in 2008 and renewed in 2013, is glad that the joint archaeological project has included in its range of activities also the application of physical and chemical investigations on archaeological finds.
The volume presents the results of the archaeometric activities which have been directed toward a wide range of materials, from clay to ceramics and bricks, from metals to bitumen. The value of these activities is enhanced by the fact that they are the outcome of international collaboration, bearing out my agreement to such collaboration framed within the Iranian strategy of development of archaeological research. I am thankful for all the scholars who have been able to produce such a valuable contribution in this perspective, be they Iranian or Italian.

Seyyed Mohammad Beheshti
Director, RICHT

Introduction

Alireza Askari Chaverdi and Pierfrancesco Callieri

The multidisciplinary approach has characterised the activities of the Iranian-Italian Joint Archaeological Mission since their beginning in 2005. The contribution of archaeometric investigations, which fortunately can now be accounted among the good practices of up-to-date archaeological research, acquires a far larger importance in the studies of material culture in those areas where we lack other supports such as a well-established and statistically reliable tradition of studies. Historical Iran of Pre-Islamic age is an area where the lack of information on ancient craft productions represents a true obstacle in the knowledge of the past, which is based mostly on written sources and on the monumental architecture of Iranian dynasties and leaves in a dramatic shadow the reconstruction of the ancient life.

The multidisciplinary project "From Palace to Town" has among its aims and methods not only diagnostic studies on the stone monuments of the Achaemenid Terrace, fundamental for further activities in their urgent conservation, but also a strong interest in the application of physical and chemical investigations for a better understanding of the classes of artefacts which have characterised the results of archaeological field work at the two sites of Persepolis West and Bagh-e Firuzi: pottery and other productions for everyday life at Persepolis West and bricks at Tol-e Ajori, the site which represents the main discovery in the area of Bagh-e Firuzi.

The wealth of activities and results fruit of the Iranian-Italian collaboration in the field of archaeometry, based particularly on the fundamental role played by the joint efforts of the team lead by Prof. Maria Letizia Amadori, of the University of Urbino, and Prof. Mohammadamin Emami, of the Esfahan University of Arts, represents to-date one of the most rewarding results of the project.

The results of this collaboration play an important role in the completeness of studies on ceramics of the Achaemenid and Post-Achaemenid periods in Central Fars, pointing to the existence of diversified centres of ceramic production in Persepolis West, remarkably distinct from the much less varied picture emerging from the studies on ceramics from the area of Pasargadae and indicative of the more "urban" character of the first site.

At the same time, the exceptional baked and glazed bricks from the monumental gate of Tol-e Ajori can now be approached also on their physical and chemical aspects, a fact that will multiply the interest of their comparison with their Babylonian prototypes of the Ishtar Gate, particularly if the project of collaboration with the Vorderasiatisches Museum in Berlin will start soon as hoped.

Other scholars have joined this collaboration, namely Prof. Marisa Laurenzi Tabasso and Dr Stefano Ridolfi, who have also investigated glazed bricks evidencing the differences between the glazed bricks from Persepolis Terrace and Tol-e Ajori, and Dr Thomas Van de Welde, which has contributed an illuminating study on the bitumen from Tol-e Ajori.

We are therefore proud of being able to present to the scientific community the reports of these activities, for which the digital format has been chosen in order to allow the insertion of a considerable amount of original information with colour illustration.

Our thanks go to all the scholars who contributed, as well to the Iranian authorities who made possible the collection and study of samples