

# Light Archaeology and Territorial Analysis: Experiences and Perspectives of the Florentine Medievalist School<sup>1</sup>

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<sup>1</sup> This paper is based on a contribute made by the “III Forum architecturae Poloniae medievalis (Cracow 22–24 March 2013)” organized by The Institute of History of Architecture and Monument Preservation, Cracow University of Technology, scientific organization by Klaudia Stala that, with Prof. Andrzej Kadłuczka, has encouraged us to offer some considerations of a method drawn from our experiences of medievalists. We would like to be pointed out as among the Italian and Polish medievalist archaeological schools exists one special scientific and cultural relationship and that goes back to the very origins of the discipline: much more than shared investigation, the names of Torcello, Castelseprio and Capaccio represent milestones in the different of medieval archeology startup seasons in Italy. Recently, several initiatives have in fact started a new season of cooperation between the two archaeological schools, for example, with the outcome of the “Murano Project”(with the University Ca’ Foscari of Venice) and the start of a Mediterranean program (with the University of Catania). This very phase also moves from a comparison between some respective, particular research paths from which to draw inspiration for new collaborations and located in a new context of those relationships – scientific and civic – as revealed recently in an original and significant initiative promoted by the Polish Institute of Culture in Rome (PAN) and the Polish Embassy in Italy (“Seminar on the perspectives of scientific cooperation between Italy and Poland”, Rome, 6–7 November 2014). In this context the participation of a team of IAEPAN to the Mission of University of Florence “Medieval” Petra is placed. Archaeology of Crusader-Ayyubid settlement in Transjordan, which, in a European configuration (with Units from France, Spain, UK), deals not only with crucial issues such as interpretations of structural phenomena of the Euro-Mediterranean medieval society “back” and the crisis of urbanism and structural function of border in the region between the Crusader-Ayyubid and Mamluk ages), but also touches the size of “public” archeology (Vannini, Bonacchi and Nucciotti 2014), with the use of selections of some important “products” of the research as a contribution to sustainable projects shared with different subjects of civil society not only local, between development, communication and identity: today a topic of significant relevance (cf. *infra* and the exhibition, curated by G. Vannini, A. Buko and T. Baranowski as part of the Meetings organized by the Italian Institute of Culture in Warsaw, the IAEPAN in Warsaw (2013, by Paola Ciccolella) and the Polish Academy of Rome (PAN) in Rome (2014, by Piotr Salwa): “ArcheologiaMedievale fra Italia e Polonia. Tradizione e futuro. 50 anni di lavoro commune”). The text here presented was completed in 2015.

The need to develop a method of territorial survey was felt by the rising discipline of medieval archaeology in Italy since the years of its initiation (about 1970–1980), when this area of research aimed address the issues raised by the French “Annalists” in studying the history of medieval societies. It was perhaps in Florence, under the guidance of the historian Elio Conti, that the essential conditions matured for a choice that identified archaeology as a meta-methodological tool able to produce documentation of the material facts ultimately useful for the purpose of historical reconstruction. Italian Medieval Archaeology also directed methodological efforts towards the use of non-invasive research tools. Another highly relevant contribution to international debates in this field was the adoption of stratigraphic theory for the study of historical architectural complexes that between the 1970s and the 1990s paved the way for a rich series of studies that in a decade came to cover the entire national territory.

The “strategic project” of the University of Florence for Medieval Archaeology, dedicated to the study of Mediterranean feudal societies through their “archaeological profiles” has been set since 1998 within the framework of historical archaeology and methodological development.

The research, conducted by the Chair of Medieval Archaeology, coordinates 11 local projects sampling a wide area between the Central Mediterranean and the Near East, with a particular focus on central Italy and south Jordan. Each project aims to produce a historical-archaeological interpretation of a cultural area in its production and socio-economic aspects, including cultural and ideological “profiles”. The paper will elaborate on the results achieved by research teams in Italy and Jordan with a special attention to actual contributions brought by the project to archaeological methods and historical interpretation in general.

KEY-WORDS: Light Archaeology, territorial history, public archaeology, euro-Mediterranean middle age

The urge to develop a method of territorial survey was felt by Italian medieval archaeology since the years of its foundation as a discipline (early 1970s), when this area of research aimed to address the issues theorized by the French “Annalists”, concerning the need of extending the documentary basis and the historicist approach, for reconstructing the history of medieval societies in Europe and beyond (Chartier *et al.*, eds 1978). The basic problem – more evident now, in the light of a number of methodological developments, including those discussed below – was the search for a balance between the “new” objectives (purely historiographical) and a redefinition of the conceptual and operational “tools” (respectively cultural, methodological, technical) used to examine them. New approaches, experimental at the time, but still in the process of progressive definition, were developed by different Italian historical and archaeological “schools”<sup>2</sup>.

In particular, this is due to the Genoese school of Tiziano Mannoni’s concept of “global archaeology” (Mannoni 1994a–d, 1995; also “total archaeology”) which involved large territorial projects where excavation was not a central component in the research strategy – as in the case of the study of the medieval *castelliere* of Zignago in eastern

<sup>2</sup> See Francovich (ed.) 1987, Gelichi 2000 and more recently the retrospect section edited by Gian Pietro Brogiolo in the first volume (2011) of “Post Classical Archaeologies”.

Liguria (Carbona *et al.*, 1978; Fig. 1). This project had adopted a diachronic long-term point of view aimed at analysing material “structures”, in the Braudelian meaning of the term. The experience of Mannoni lies at the root of many new methodological interpretations of the discipline: from landscape archaeology to archaeology of buildings and a re-interpreted role of archaeometry.



**Fig. 1.** Global Archaeology in Mt. Zignago (Liguria, 1977). Archaeological illustration showing a reconstruction of the medieval settlement. The stress on building technologies, impressed by Tiziano Mannoni, is apparent also in modern tourist signs placed at the site

But it was perhaps in Florence, under the guidance of the historian<sup>3</sup> Elio Conti in the 1960s, that a number of methodological conditions finally matured (Fig. 2). In particular as regards a methodological choice that identified archaeology (as a meta-methodology) to be the right tool for producing a documentation of the material

<sup>3</sup> Again by historians, after the period of origin of medieval archeology in Italy, characterized (although on a different basis) from the peculiar relationship, which would have remained, in fact among Italian historians and Polish archaeologists of the PAN, in the early 1960s (in Torcello: Leciejewicz *et al.*, 1977 and Castelseprio: Dąbrowska *et al.*, 1978/1979) and then just a decade later (in Capaccio: Cilento and Hensel eds 1976).



**Fig. 2.** Castelseprio (Lusuardi Siena 2013). The mission of the PAN and the origin of medieval archaeology in Italy (1962)

facts useful for the historian (Vannini 2011; Fig. 3). The choice made by Elio Conti, to use archaeology for integrating written sources, was not, in principle, a compulsory one at all (Fig. 4). Taking for granted that, at least in Italy, cultural landscapes constituted a reified material memory of events and historical phenomena (especially of Medieval times) at the same time of clear relevance and of ineffable perceptibility (at least from the point of view of written sources), it must be considered that other territorialist options, as the history of architecture or historical geography (just for example: Magnaghi 1998; Azzari 2006), could have been adopted in place of archaeology for the same purpose.

Nevertheless, archaeology and the (then) renewed stratigraphic method, offered a number of benefits for having material evidence fruitfully interacting with



**Fig. 3.** Capaccio Vecchia (Baranowski 2013): a Polish-Italian excavation under way (1973)

historical-documentary research. In the first place, the chronological reconstruction in (stratigraphic) archaeology was based on the recognition of very elementary and self-evident spatial/physical relationships (between stratigraphic units: Harris 1989), with no need of appealing, for example, to a superordinate theory such as stylistic and morphological evolution; the influence of which has been in the past strong in art history and history of architecture. The relative chronologies produced by stratigraphic archaeology, all in all, could be easily verified and understood also by historians.

A second type of advantage, for medieval historians “adopting” archaeology, was provided by the archaeological need to develop stratigraphically consistent chrono-typologies for artefacts, centering the system of investigation on “the context”, with the



**Fig. 4.** Prof. Elio Conti, during a break in the “excursions seminar” in search of “medieval” sites and landscapes in the Florence area (Mugello 1968). Alongside Prof. Conti, the “assistant” (later Prof.) Giovanni Cherubini, among the students (future medievalist teachers): Franek Sznura, Elisabetta Gigli, Patrizia Parenti, and the author (from behind)

multiplicity of its meanings (Manacorda 2004). This allowed historians to focus on the issue of supply chains and manufacturing processes within identified historical and territorial contexts, also highlighting the activity of crucial social groups (as craftsmen and labourers) notoriously under-represented in medieval written sources.

A historical archaeology of the Middle Ages showed itself, already in the 1960s, to be able to put into play significant new elements integrating the presently-available documentary basis, a novelty that was little by little recorded also in authoritative handbooks of medieval history (Delogu 2003). Eventually then, such a perspective has gained such significant success that, as has been recently stated by medieval historian Sandro Carocci (2010), today it does not seem possible or even plausible to ignore the contribution of medieval archaeology in broad sectors of Italian historical research (the history of medieval settlement being perhaps the most notable one)<sup>4</sup>.

<sup>4</sup> It is worth mentioning, here one of the most productive attempts to merge historical and archaeological sources, the first of its kind in Europe and a product of Polish research. Especially dedicated to the history of early medieval “Eastern Europe”, this work is due to one of the greatest archaeologists of

Italian Medieval Archaeology, in parallel with a close relationship with historical research, has contributed also to the development of archaeological methodologies at a European and world level. A specific and particularly outstanding contribution was in fact provided in the field of non-destructive urban and territorial analyses. Such was indeed the (successful) attempt to embed stratigraphic theory in the study of historical buildings, extending the principles of site-formation-process to the architectural-formation-process.

The Italian approach (it should be noted) differs markedly from the French experience of *archéologie du bâti* (Parron-Kontis and Reveyron eds 2005) in its theoretical assumptions and, specifically, in its purpose of achieving historicist cognition, in one word in scientific dimension; although in the *archéologie monumentale* (Hubert ed. 1961) the effort to use archaeological methods specifically for monumental buildings must be acknowledged. On the other hand, a debate is now open with certain historians of architecture, often heated and not free from misunderstandings, although syntheses of different sensitivity, scientifically brilliant, are not lacking in that area<sup>5</sup>. Between archaeologists and historians of architecture, however, is currently delineated the respective domains of the “construction” of the material document, which sees the object itself, of course, at the confluence of different research paths.

Concerning archaeology, based on the outcome of a pioneering study carried out in 1970s by Tiziano Mannoni (1976), and on a progressive methodological definition by Riccardo Francovich, Roberto Parenti and Gian Pietro Brogiolo in the 1980s<sup>6</sup> it was finally possible, in the 1990s, to establish a standard set of techniques for the stratigraphic investigation of medieval (and historic) buildings (Fig. 5). Such an achievement was of particular importance since, for the first time, a non-destructive archaeology could create reliable stratigraphic sequences on a territorial scale. This paved the way for a rich series of studies that, in a decade, came to cover (though not uniformly) the entire national territory.

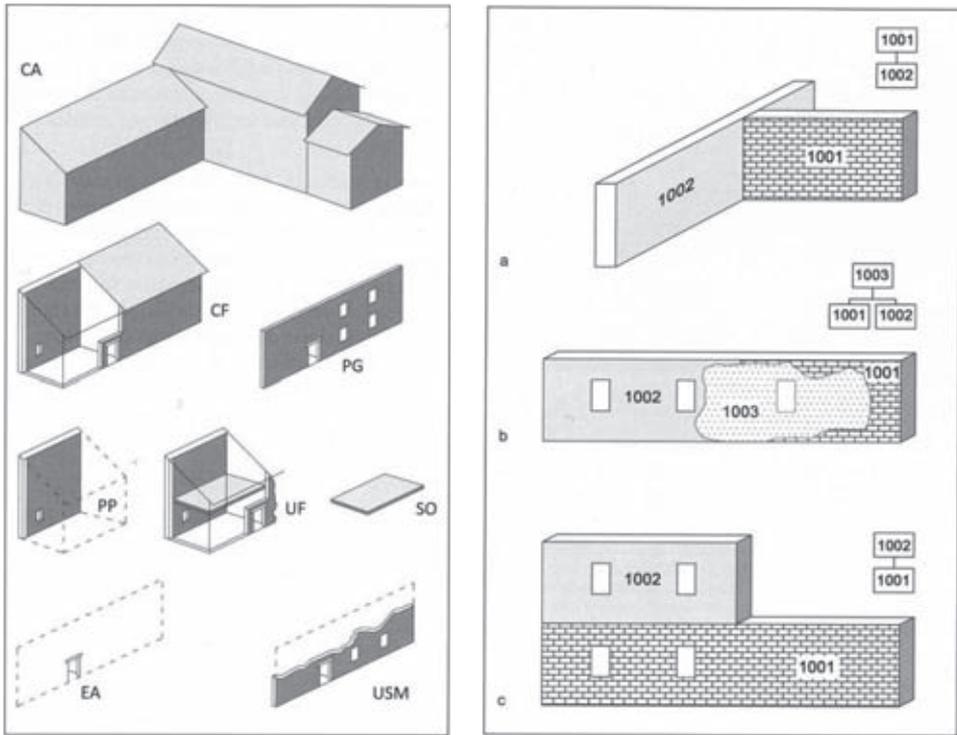
First published in 1996, as an attachment to the journal *Archaeologia Medievale*, the journal *Archaeologia dell'Architettura* (published in Florence) has dramatically contributed to the spread of the methodology of stratigraphic architectural studies at a broader academic level, also involving since then architects and architectural historians in the research. In 2002, the publication started in Spain of a second journal *Arqueologia de la Arquitectura* (published in Vitoria-Gasteiz), strictly and explicitly linked to the Italian experience (Nos. 1/2002, 2/2003).

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Europe, perhaps the most illustrious (and not only for scientific merit, as also inseparably civic) medievalist of the Polish school, our unforgettable friend Lech (Leciejewicz 2004).

<sup>5</sup> See for instance the insightful work of Francesco Doglioni for integrating stratigraphic readings and restoration practices (Doglioni 1997).

<sup>6</sup> Of primary importance in this process were Mannoni 1984, Francovich Parenti (ed.) 1988, Brogiolo 1988 (now included and revised in Brogiolo and Cagnana 2012) and Parenti 1992.



**Fig. 5.** Archaeology of Architecture. To the left: elements of archaeological readings and filing, from the architectural complex (CA) to wall stratigraphic unit (USM) and architectural element (EA). To the right: exemplifying wall stratigraphy (Brogiolo and Cagnana 2012)

2. The strategic program of the University of Florence for Medieval Archaeology, devoted from 1998 to the study of the “archaeological profiles” of Mediterranean feudal societies should be contextualized in this framework of historical archaeology and methodological development. This long-term research project, directed by the Chair of Medieval Archaeology (Vannini 2011) is based on a comparative territorial method and coordinates several regional projects (currently nine) spread over a wide area between the Central Mediterranean and the Near East (particularly in central northern Italy and southern Jordan). Each project aims to develop a historical-archaeological reconstruction of a specific historical medieval region, highlighting production and socio-economic aspects, including cultural and ideological profiles. All projects deal with rural settlement, mostly between the tenth and fifteenth centuries, with a significant concentration on the period between the twelfth and fourteenth centuries. Moreover, all projects investigate “feudal” territories, or rural areas whose economic, political and settlement frames were characterized by management models promoted by

non-urban aristocracies<sup>7</sup>. Such constants provide a comparative basis to study feudal societies at a Mediterranean scale.

In addition to the thematic context, all local projects share the same methodological approach that we call “Light Archaeology” (Vannini 2003; Vannini and Nucciotti 2011). This is characterized, in its essence, by the archaeological study of historical phenomena (not of episodes) on a regional scale; re-connecting with Elio Conti’s insight that sees the territory itself as a reliable source for interpreting the Past. In “Light Archaeology”, the territory is explored through non-destructive archaeological methodologies<sup>8</sup> and targeted excavations are performed in a class of sites termed “stratigraphic observatories”, selected in the first place on the basis of the model of interpretation adopted, especially of the results from research in progress. Such limited excavations are specifically meant to produce knowledge on the investigated historical issues (themes) and territorial systems (areas) able to interact with the dataset of non-destructive analyses (Fig. 6).

Studies carried out so far have contributed to the archaeological knowledge of upstanding historic buildings, for example in the realm of stone masonries’ *mensio cronologia* (Nucciotti 2000), or as regards medieval building practices (through the analysis of micro-stratigraphic building phases: Nucciotti and Vannini 2003; Marcotulli 2010) and stone quarrying (Nucciotti and Pruno 2011; Fig. 7). Thanks to strategic partnerships with research institutions from CNR (Rome) and CNRS (Marseille, France), building micro-stratigraphy was also tested as a predictive tool for assessing hydro-geological risk and local archaeo-seismology (for instance in Tuscany: Vanni Desideri 2001; Arrighetti 2013, Corsica at Santa Maria di Rescamone: Gabrielli, Vannini and Nucciotti 2005 (Fig. 8), or in Jordan at Shawbak: Nucciotti 2007), while integrated management systems of inconsistent datasets were also developed, with XML technology (Fig. 9)<sup>9</sup>.

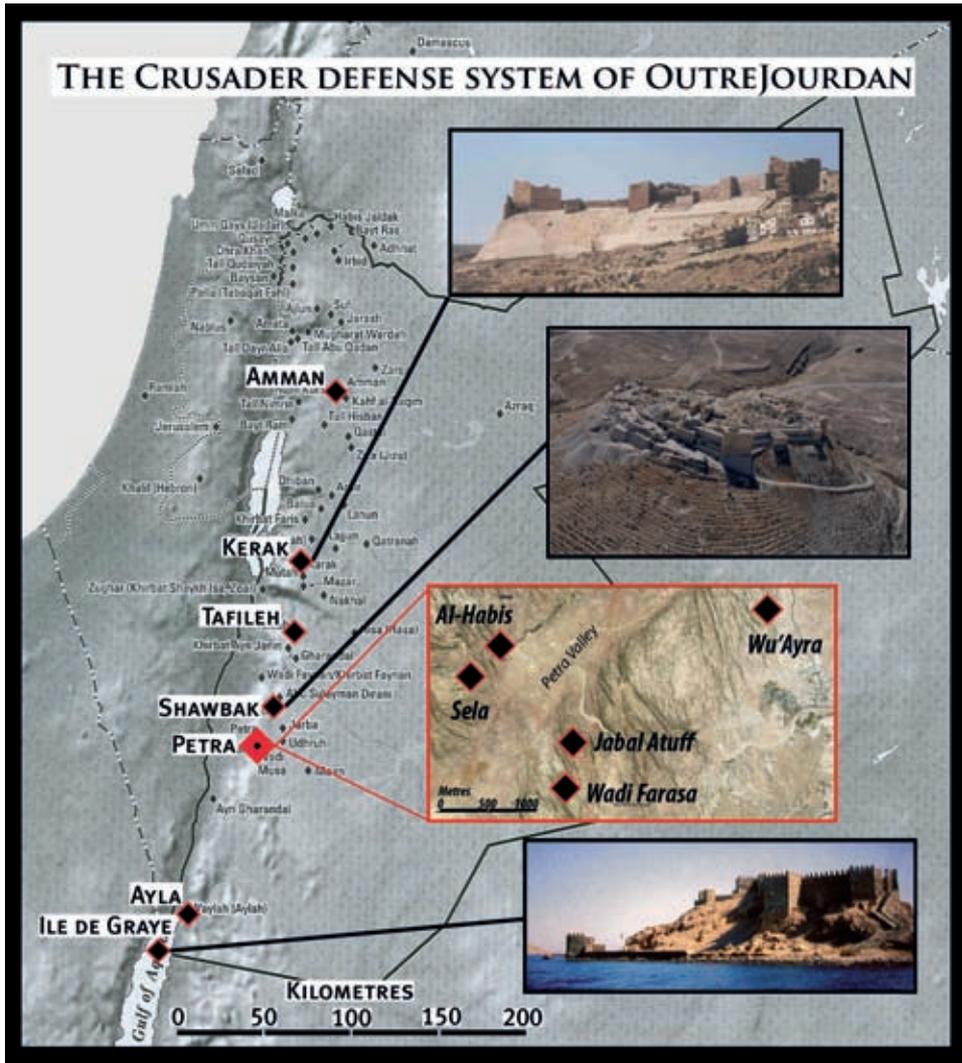
Practices of conservation/restoration able to guarantee a high readability of masonry stratigraphy in restored historical buildings were tested in Jordan in collaboration with the Faculty of Engineering of Pisa University (Ruschi and Vannini 2001; Ruschi 2007; Ruschi and Sodi 2009; Fig. 10), together with participatory Master Planning strategies, for integrating the needs of resident communities in site enhancement requirements (mainly in Jordan and, in Tuscan Maremma: Vannini and Nucciotti 2012b).

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<sup>7</sup> In the Florence strategic program, the term “aristocracy” is normally used to refer to large families and individual members of the ruling class able to organize territorial structures at a regional or sub-regional scale.

<sup>8</sup> An approach that integrates typical procedures systems of environmental archeology, landscapes, building archaeology and provides targeted essays.

<sup>9</sup> Latest advances and reference to previous bibliography in Drap, Pruno and Nucciotti 2012; Drap *et al.*, 2012.



**Fig. 6.** Territorial Archaeology at Petra. Royal Transjordan and the making of a Crusader Lordship (AD 1100–1142). The rebirth of a frontier and the role of Petra (Florence University: Medieval Archaeology archives)

Concerning results in historical reconstruction, the use of broad spatial contexts allowed to frame the planning of the landscape by medieval rural aristocracies, within its original technical and ideological basis. The “Light Archaeology” approach, also in this case, has led to a significant revision of previous historical interpretations grounded strictly on the written sources (Fig. 11). For example, the studies carried out on the

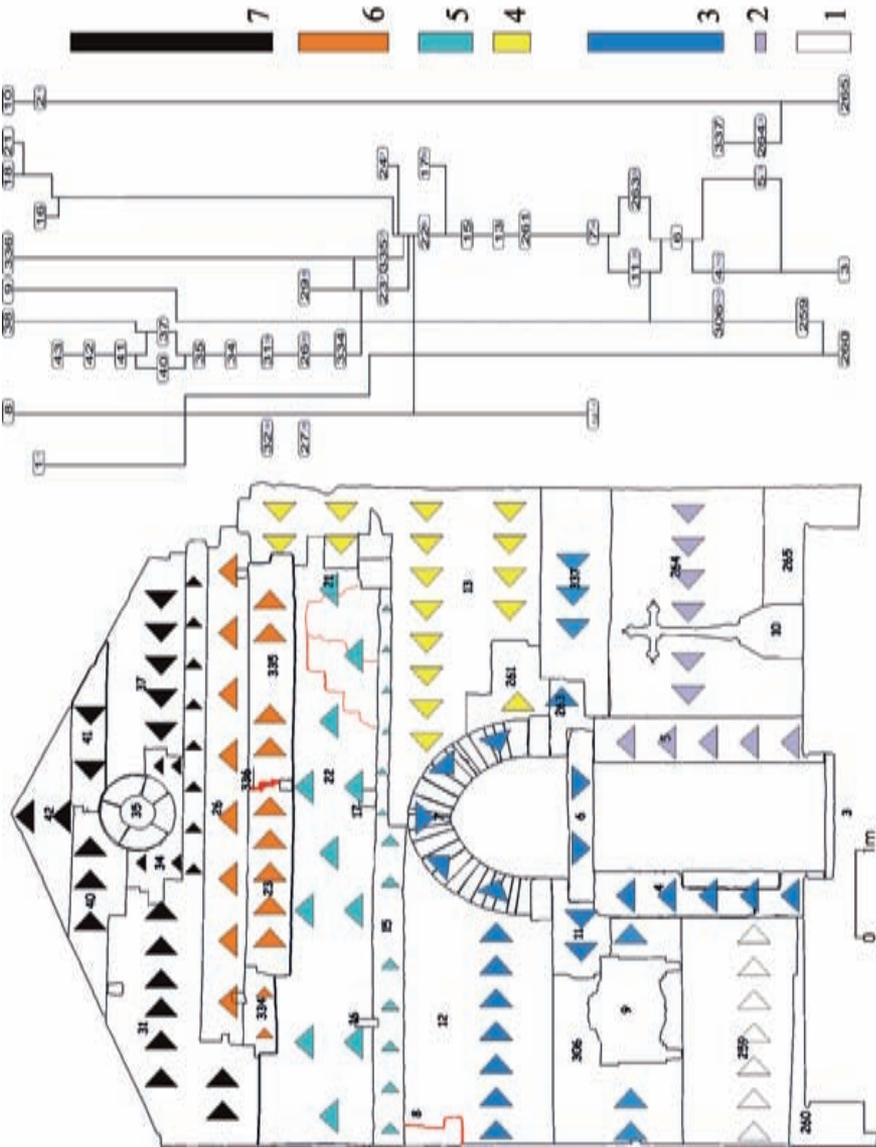
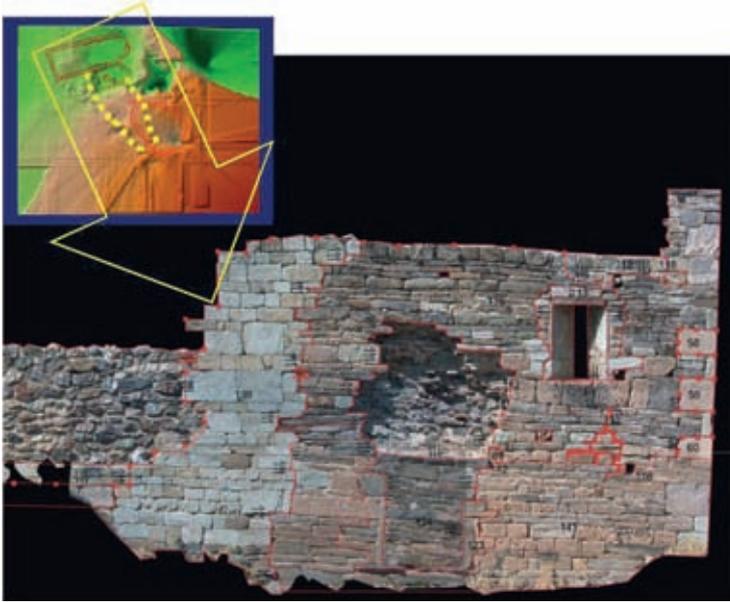
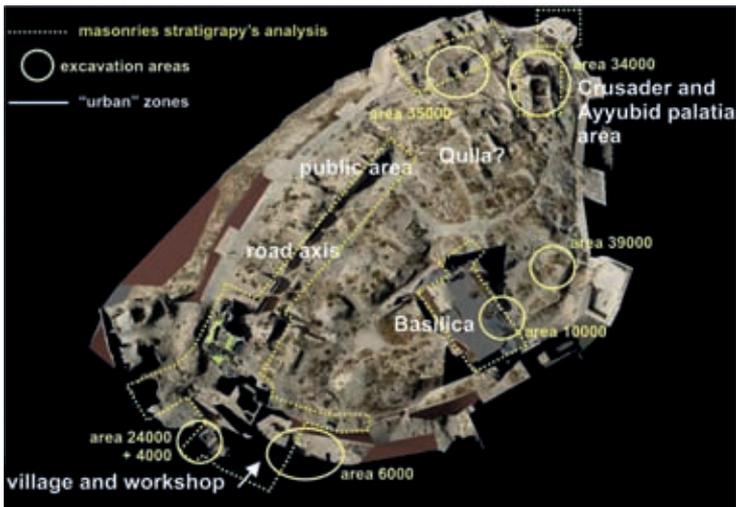


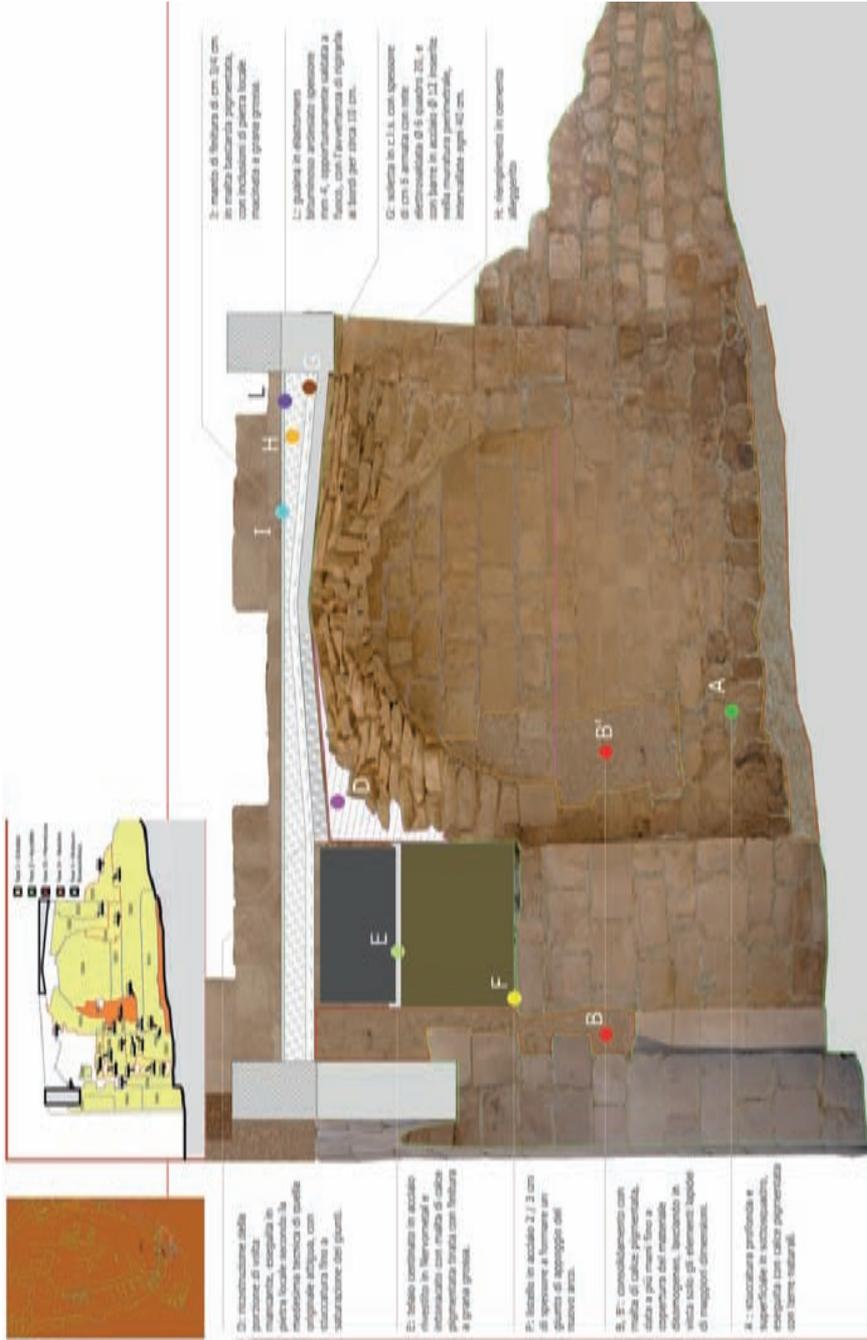
Fig. 7. Micro-stratigraphic analysis of the romanesque building yard at St. Nicolaio in Monsummano Alto (Italy, Pistoia) (Florence University: Medieval Archaeology archives)



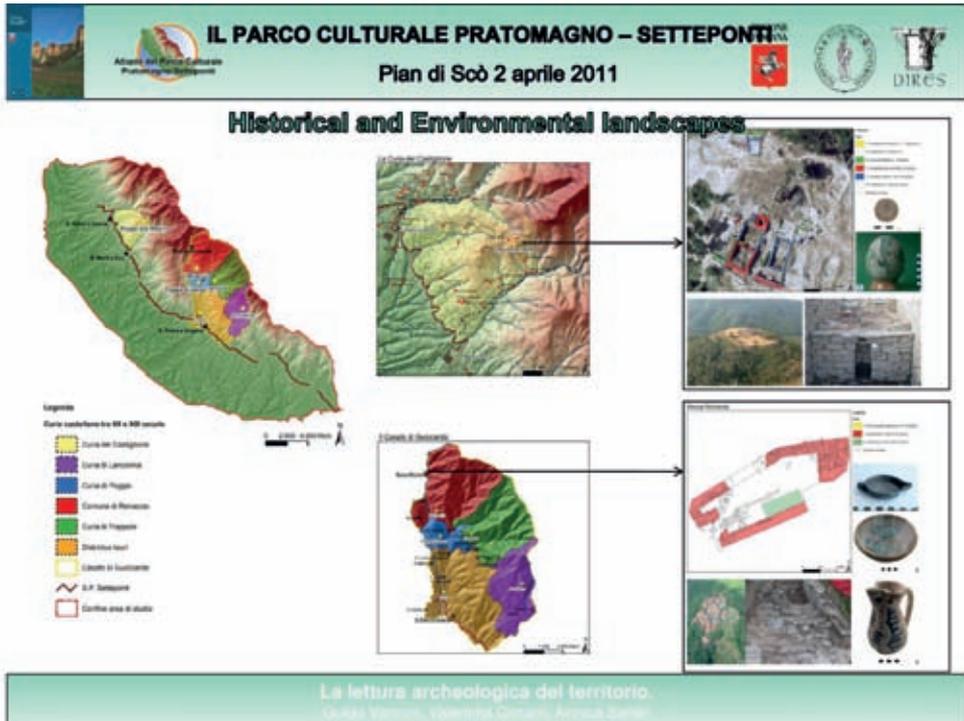
**Fig. 8.** St. Mary of Rescamone (Corsica). Geophysical analysis on the site shows a geological fracture that was also hypothesized on the basis of archaeological readings of the southern elevation of the medieval church (CNR ITABC Rome and Florence University: Medieval Archaeology archives)



**Fig. 9.** Shawbak: 3D photogrammetric site model with general topography of archaeological investigation (CNRS L-SYS Marseille and Florence University: Medieval Archaeology archives)



**Fig. 10.** Restoration plan for the fortified gate cf5 at Shawbak. Translating stratigraphic analysis into restoration and conservation practices (Florence University: Medieval Archaeology archives)



**Fig. 11.** The Arno valley (Florence-Arezzo, Italy) of Earls Guidi: from “Light Archaeology” to public archaeology (detail view of GIS system of Pratomagno historical-archaeological settlement; Florence University: Medieval Archaeology archives)

highest rank Tuscan aristocracies of the Middle Ages helped understand how major “feudal” houses of the region (the Earls Guidi: Molducci 2012 and Aldobrandeschi: Nucciotti 2010) organized their territories. This is knowledge the historical memory of which had been almost entirely lost, given the little written evidence that has survived to our times (Collavini 1998). In particular, territorial-archaeological studies carried out by Florence University showed that such families had government and management skills fully comparable to those of their urban counterparts (as in Siena, Florence or Pisa). For instance, both the Guidi and Aldobrandeschi were able to develop long-term infrastructural projects at a sub-regional scale; this included for example the direct management of crucial segments of the international roads leading to Rome, as well as the setting up of complex settlement systems in rural areas<sup>10</sup>.

<sup>10</sup> Nucciotti and Molducci *in print* (online version available at: <http://alturl.com/e5xt8>)



**Fig. 12.** “Light Archaeology” of “medieval” Petra. Topographic stratigraphy of the Crusader castle at Al Habis (Petra, Jordan; Florence University; Medieval Archaeology archives)

In Jordan, finally, Florence University research has led to the recognition of a classical system of *incastellamento* in the Petra-Shawbak region, identifying the focal role of Crusader dominions (1101–1189) in the long-term political re-composition of south Jordan, a region long disputed between Syria and Egypt (Vannini ed. 2007; Vannini and Nucciotti eds 2009; 2012; Vannini 2011; Fig. 12). Still in the same area, the stratigraphic study of Shawbak monuments dated to the 13th century clarified the relationship between technological innovation and the creation of “politically decipherable” landscapes (Fig. 13). Indeed on several occasions, between the late 12th and late 13th centuries, in the architectural traditions of Shawbak Saladin and his heirs “quoted” from caliph al-Samarra (in the Ayyubid palace, c. 1189–1208), rather than from Damascus (in the 1212 the *via recta*) or Cairo (in the 1297–1298 ramparts of Husama al Lajin), with a clear legitimizing and political function (Nucciotti 2012b). This is a set of data that has led to the identification of a large-scale project: the radical and unexpected



**Fig. 13.** From Crusader castle to Ayyubid city. Saladin’s siege of Shawbak in 1189, with the reconstruction of the southern rampart based on stratigraphic readings of upstanding buildings. Archaeological illustration by Inklink, Florence



urbanization of the old princely Crusader castle on the one hand, and in parallel, the “conservation” of the role of capital “city” exercised by Shawbak within a broad administrative district inherited in fact from the age of the Crusades (Fig. 14)<sup>11</sup>.

Light Archaeology, therefore, is proving to be a useful theoretical and practical tool for the historical-archaeological investigation of vast territorial complexes (Fig. 15). Moreover, in the experience of Florence University, Light Archaeology was and is also a most efficient methodological (and cross-curricular) incubator, whose potential has not yet shown, perhaps, all the implications and opportunities to create a form of archaeological research fully able, in its original form, to contribute to the definition of authentic historical issues. Equally, on another but closely related level, further development may indicate its potential contribution to the setting up of efficient public archaeology programs, including widespread communication and archaeological-territorial heritage management.



**Fig. 15.** The Crac de Montréal (Shawbak), at the edge of the Arabian desert (Florence University: Medieval Archaeology archives)

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<sup>11</sup> A framework that, on the archaeological side, has led to a redefinition of the mission's tasks which this year will also see the collaboration of a team of PAN.

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