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A MEDIEVAL ARCHAEOLOGY EXPERIENCE IN JORDAN THE 'MEDIEVAL' PETRA MISSION OF UNIVERSITY OF FLORENCE

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The Archaeological Mission of Florence University 'Medieval' Petra. *Archaeology of settlements in the Crusader-Ayyubid age in Trans-Jordan* is part of the 'Strategic University Project' on *Mediterranean Feudal Society: Archaeological Profiles. Rise and fall, at the origins of modern Europe*, conducted by the Chair of Medieval Archaeology and dedicated to the archaeological study of feudal society – through the analysis of settlement forms in various territories within the Mediterranean area – at a time when the latter was the setting of a lengthy confrontation with the new political entities which were being established from Western Europe to the Islamic Mediterranean East in the late Middle Ages.

The research is aimed at documenting the material "characters originaux" of the first Crusader settlement phase which are better preserved and stratigraphically readable, after the complete and final abandonment following the battle of Ḥiṭṭīn, 1187 (Kedar 1992; Ligato 2006), where the army of the Latin Kingdom of Jerusalem was defeated by Salah ad-Din. Within this framework, for

about twenty years now, the mission has been engaged in a 'territorial archaeology' survey programme with a view to analysing the features and form of Latin 'incastellamento' in the territories corresponding to the Lordship of Trans-Jordan in the XII century, both in its structural aspects and as an 'observatory' on the Crusader-Muslim frontier in the Holy Land, with respect to the Ayyubid settlement model (Vannini and Desideri 1995). The mission is divided into archaeology research (University of Florence), restoration (University of Pisa), archaeometry (University of Urbino), territorial topography (CNR – Istituto per le Tecnologie Applicate ai Beni Culturali of Rome), ICT development (CNRS – LSIS of Marseille – France) groups (Fig. 1)¹.

An element which, from the very outset, has characterised the mission's purposes is the introduction of recent methodological approaches and research procedures typical of some Italian and European medieval archaeology schools of thought in a region where traditional archaeology always owed its success (and still do)². The

1. The institution supporting the project is the University of Florence (Medieval Archaeology Chair at the *Dipartimento di Studi Storici e Geografici*) in collaboration with the Department of Antiquities of Jordan; in 1999 it was a 'Pilot Project' of the MAE, also being financed several times by the MIUR as one of the 'Scientific research programmes of relevant national interest' (1989-2008), through the FIRB (2005-2008) and by the Italian-French bilateral scientific programme 'Galileo/Egide' (2005-2006); it has the continuing support of the MAE-'Cultural Relations' G.D. as Mission and pilot Project (1999) archaeological project (1987-2009) and since 1999 it has been a 'Strategic project' of Florence University. The mission is also part of the *Italian-Jordanian cooperation agreement* (since 1991), in 1994 it was acknowledged as one of UNESCO's goals and has been availing itself of a logistic base financed by the University (lodging, laboratory, computer workstation and an archive to file the findings) in Wādī Mūsā (Petra). Information about the mission can be found on the Internet in the website: www.shawbak.net.

2. A role which was objectively carried out by the mission throughout its history and from which - I remember with pleasure new and independent research threads directly derived from it. It is the case of the work by the *Archaeological Restoration Research Group in Jordan*, directed by Luigi Marino (University of Florence) which since 1991 has been conducting intensive campaigns dedicated especially to survey and restoration issues in archaeological-monumental areas as part of the programme of the *Studium Biblicum Franciscanum* in Jerusalem (Marino 2003); or of the mission directed in 1993 by Roberto Franchi (University of Urbino) in the area of petrography applied to the preservation of archaeological sites in the Petra valley (Franchi 2003); or of the mission directed by Cristina Tonghini (University of Venice) which since 2002 has been at work on the Islamic fortified site of Shaizar, in Syria (Tonghini *et al.* 2003). Mention should also be made here of the programme on archaeological buildings on Umayyad sites conducted by Roberto Parenti (University of Siena).



1. University of Florence project base in Wādī Mūsā, with accomodation, laboratory and logistical facilities.

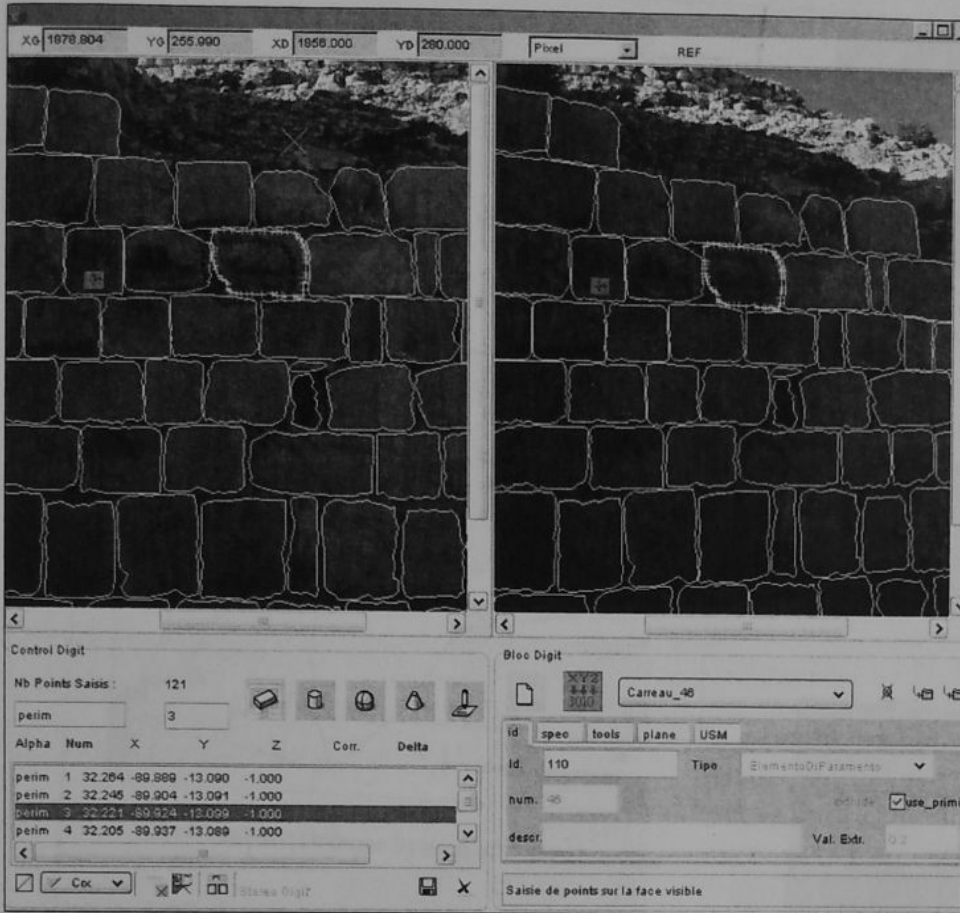
experiences in historical archaeology and territorial research, the necessary relationship with written sources – which characterise any research whose aim is to contribute to the designing of a historiographical interpretation model for a Mediterranean-based ‘medieval’ period (as in our case) – led to adopting an integral stratigraphy study approach not based mainly on excavation. The basic methodology option, indeed, consists in attributing a strategic role to ‘light archaeology’, a codified reading which, to sum up, integrates in a systematic way the various non-invasive archaeologies (landscape, environment, buildings, computer archaeology; targeted essays); all this allows for a use – and economically, in relation to the aims – which is directly historical of the documentation and of the archaeological analysis itself, as regards the cultural ‘structures’ of the past. It is indeed true that some of the solutions adopted are still experimental, but this is exactly in the line of whole sectors of recent archaeological research, especially regarding the Middle Ages (Fig.

2). The central focus of the latter has been on fine-tuning and targeting their analysis tools of pre-industrial societies and their material ‘structures’ towards a reconstruction-interpretation of events and historic features based on the integrated use of various sources and in relation with other historiographical approaches³.

Within this framework, the ‘excavation’ is used for well-defined targets emerging from research conducted on a territorial level and with variable intensity: from the large scale (the Crusader-Muslim frontier between Syria and Jordan), to the medium scale (the region included between the Dead Sea and the Red Sea), to the small scale (the Petra valley), down to the choice of ‘stratigraphic observatories’, identified on the basis of structured ‘material-archives’ in the area under consideration, which are able to provide reliable information not only about themselves, but also about the category (culture, chronology, typology) to which they belong and therefore about the ‘environment’ constituting their specific historic setting. This allowed for opti-

3. Hence the adoption of innovative methods whose aim is to overcome also the physical limitations of traditional excavation archaeology; this essentially means moving from the analysis of the episode (a site, an event) to that of the phenomenon (an environment, a topic): in other words, going from deductive analysis to inductive analysis. These were the assumptions chosen to design a territorial analysis system and an integrated technological measurement process: for this specific aspect the contribution by the Project was particularly relevant, especially as regards the merging and manage-

ment of data which are heterogeneous also in terms of type, thus developing an effective representation and management model of the ‘archaeological space-time’ (e.g.: Drap *et al.* 2009; see Lucas 2005, 1999). This perspective, in a certain respect between method and merit, also serves the purpose of highlighting the character of a study area, archaeology, which may be able to contribute better than others to bringing closer the humanistic and scientific-technological side of culture; more in general, this issue appears to be increasingly crucial in contemporary society.

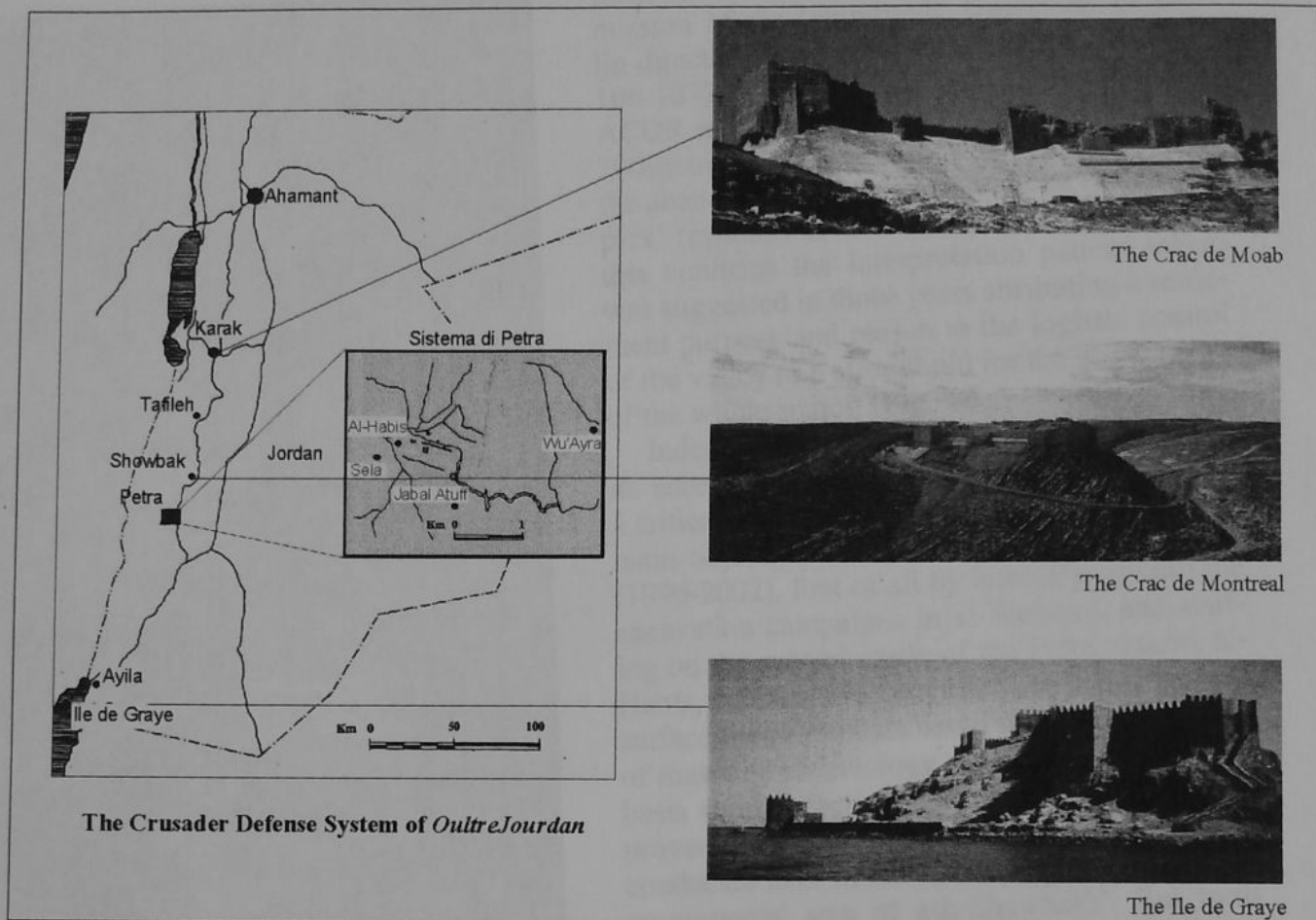


2. Ash-Shawbak: classification, interactive mapping, digitised catalogue of walls detected by photogrammetry.

mal use – and significant results which we think could be helpful as regards the quality of some historical interpretations suggested – of the investigations conducted (and now in progress) in two sites extensively excavated: the al-Wu‘ayra Castle, suggesting an interpretation model for the Crusader settlement in the Petra valley, and the ash-Shawbak monumental fortified site, for the poleo-genetic function which the reactivation of the frontier in the region triggered on a site which proved to be an authentic archaeological archive for the history of the whole region over a long period of time.

The first phase of the surveys (1986-1995) served the purpose of outlining the territorial framework of the first Crusader presence in the *Outrejordan* area, through ‘varied-geometry’ and variable intensity studies as well as, of course, on the basis of the interpretation models available at the time (in the mid-1980s), which had to rely on written sources as well as on the related long-standing tradition of studies in the sector, also regarding topography (Deschamps 1939: 40; Praver 1982: 333-4; Pringle 1989: 171-202). Subsequently, on the basis of the results achieved during this work – sys-

tematic campaigns and ‘light’ readings carried out on the whole area represented by the sites which made up the settlement system of the Latin Lordship (al-Karak, at-Ṭafilāh, Petra, ash-Shawbak, Ayla, Pharaoh’s Island) – the research activity gradually focused more and more on southern Jordan, always with a view to assessing the methods, timing, operational choices and reasons underlying the Crusader settlement and to choosing one of the large fortified settlements present in the area – mainly ash-Shawbak and al-Karak according to the data found in literature – as a ‘stratigraphic observatory’ for the whole region (Fig. 3). However, the evidence from territorial data literally led us, so to speak, to follow the very ‘traces’ of the Crusaders, to the surprising discovery of the new, though politically ephemeral, central role granted to the Petra valley by King Baldwin I himself (a few months after having conquered Jerusalem) as part of the Trans-Jordan territorial structure (Vannini and Nucciotti 2003). In other words, far from being a mere garrison, as it has always been considered (Musil 1907: 64 ff.; Brunnow and Domaszewski 1904-9; Deschamps 1934-39: 40-41; Kennedy 1994: 24-30; Pringle 1989),



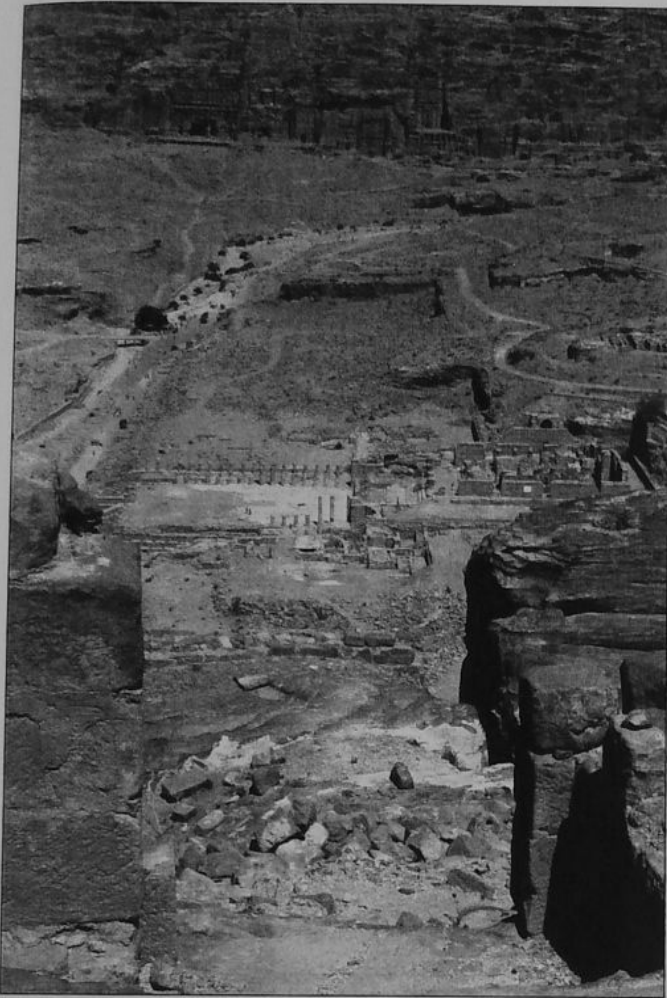
3. Settlement in the Lordship of Transjordan and the Crusader fortification of Petra.

after nearly five hundred years of obscurity, in Petra there emerged an authentic, complex, mature traditional feudal fortification system of the whole valley, founded on the two large (as the subsequent 'light' surveys documented with precision) Castles of al-Ḥabīs and al-Wu'ayra, and other strongholds including among others (not all those mentioned in the chronicles have been identified), those located on Jabal 'Atūf or al-Khubtha (Fig. 4). In this regard, a specific documentation significance was acquired by the

stratigraphy reading programme, both horizontal (with diagnostic surveys and then extended sondages) and vertical (with targeted surface reconnaissance and wall stratigraphy analyses), conducted in the archaeological area of the imposing castle at al-Wu'ayra -*Li Vaux Moises* (Fig. 5)⁴. The site confirmed its role as strategic 'key' for Petra, not only during the Crusader period, and fully expressed the function as archaeological 'observatory' on the whole settlement in the valley during the XII century in many

4. The surveys made it possible to document a first structure which in all likelihood dated back at least to the Nabataean age (including also proto-historic evidence), obtained by blocking and filling the wadi north and south of the area, and especially the essential structures of the crusader settlements, for example the internal communication system (pathways, passages, patrol pathways, ramps, posterns, moving bridges); the water system for the collection, storage, distribution of rainwater; the urban plan of the keep; the stronghold and monumental area, with the various connection systems to the surrounding defended area. The fortified system consists of double line defended by as many as 14 quadrangular towers. Within this system, the formwork rises in an eccentric position along

the external defence line and significantly at the level of the only access to the whole complex; the latter is protected on the outside by an imposing isolated foregate on the Wādī al-Wu'ayra, which makes use of a previous structure dating back at least to the Byzantine age, provided with moving bridges on both sides. The complex of the fortified church, which can be accessed through a ramp where the crusader graveyard was found protects the access to the main water tank of the whole settlement. Near the church two other accesses, to the north and west, establish a communication between the formwork and the more external fortification area. The site appears to have been abandoned after some of its parts had been reused briefly for production activities (Vannini and Vanni Desideri 1995; Vannini and Ton-



4. The valley of Petra in the XII century as seen from the Crusader castle of al-Ḥabīs; based the recent discovery of spectacular imperial re-urbanisation.

respects (Fig. 6). This made it possible to put forward a historic-archaeological interpretation model which in later years was surprisingly confirmed also through research by other missions. For example, the pottery series documented with the outmost chronological precision (and for the very first time as regards similar productions from the XII century in the region: Neri 2006/7) allowed for the identification of a settle-

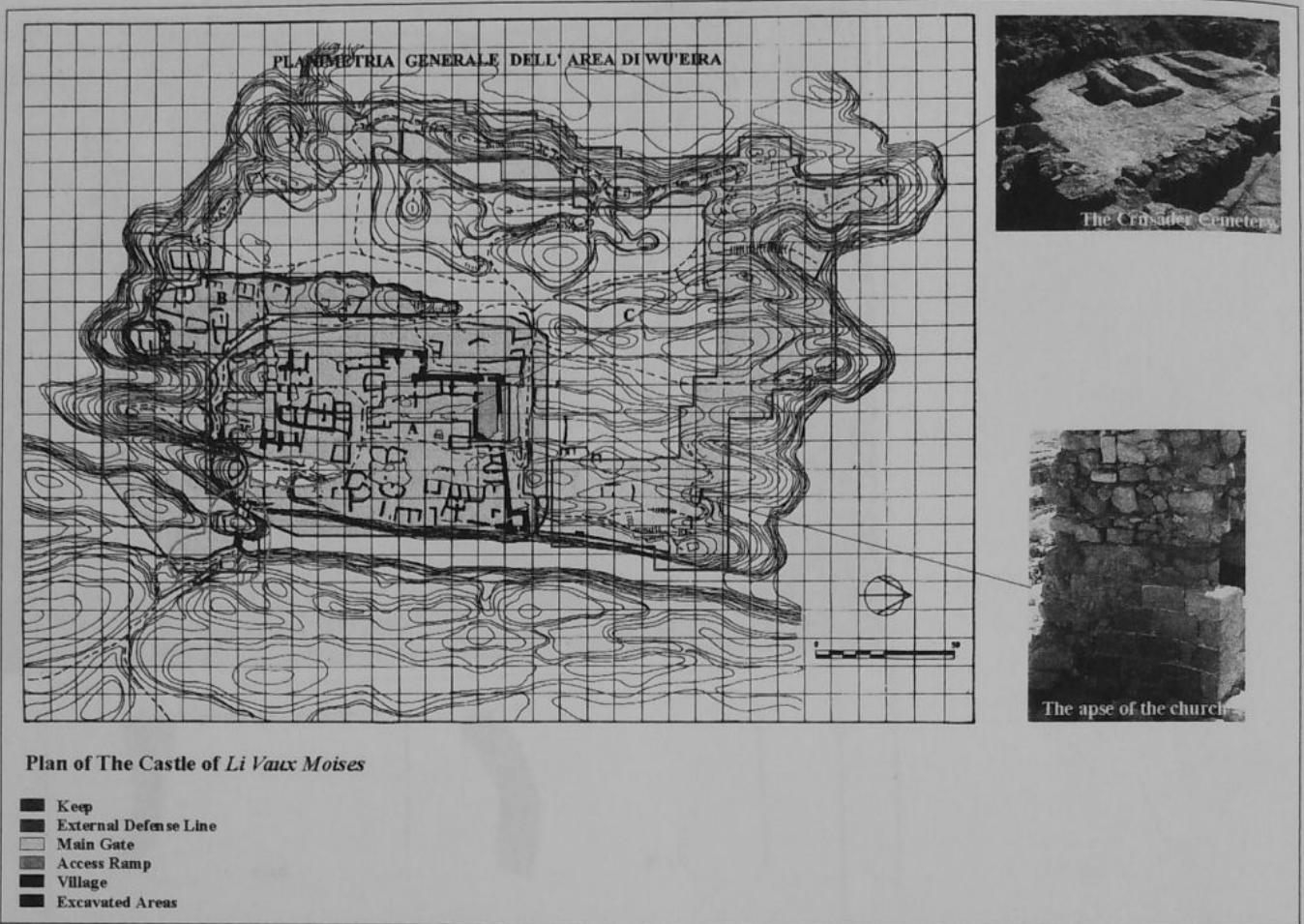
5. The rocky hill of al-Ḥabīs is the control point inside the Petra valley, part of the same system as al-Wu'ayra, which is its outside part. The surveys confirm that it has been used in antiquity at least since the Roman-Byzantine age. The fortified structure is divided into at least two separate phases. The stratigraphic analysis of the structures showed that the first phase of the building work was limited to the upper keep area, on the remains of an imposing Byzantine donjon; only later, with the construction of a large cistern resting on the second row of walls, was the settlement extended to the lowest terraces of the relief, to include as many as three rows of walls, as well as an imposing tower on top.

6. The drafting of chrono-typology atlases of stratigraphically attributed masonry work is one of the basic critical

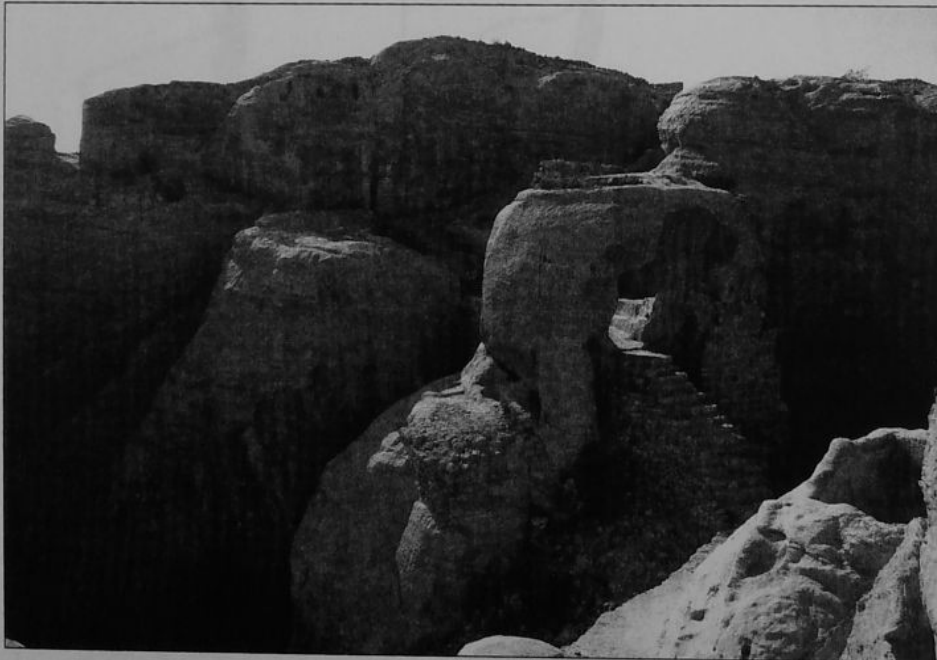
ment at the bottom of the valley (Wādī Farasa, mission of the 'Humboldt' University of Berlin directed by S. Schmid: Schmid 2006, 2009: 106-107), of a second one just outside it (Bayḍa, ACOR mission directed by P. Bikai: Bikai *et al* 2009) and, most recently of ploughing traces in the abandonment levels of the 'Petra Pool Complex' (mission of University of Pennsylvania): this confirms the interpretation pattern which was suggested in those years attributing a settlement purpose and reason to the logistic control of the valley as a stronghold for the government of the whole region (Fig. 7).

Indeed, the construction of this model and of its necessary material documentation basis with a critical review of written sources, has been the main objective of the following set of surveys (1996-2002), first of all by intensifying both the excavation campaigns in al-Wu'ayra, and starting on the second castle of the Petra system, al-Ḥabīs, an intensive programme of readings and surface measurements based on the strategic use of masonry archaeology on a 'topostratigraphic' basis (with experimental solutions which have proved particularly useful for the exploration conducted later in the demanding archaeological monumental area of ash-Shawbak)⁵. But most importantly the targeted 'landscape archaeology' campaigns were conducted to provide a first mapping of masonry types in the 'Crusader-Ayyubid' period which proved extremely interesting also in a specific respect: documenting the constant and planned reuse – both for strategic (the choice of sites) and tactical reasons (reuse, both *in situ* and of the materials) – by the Crusaders of abandoned site structures attributable to the ancient *limes arabicus*; this happened in al-Wu'ayra, al-Ḥabīs and ash-Shawbak (Fig. 8)⁶. In other words, the reactivation of an old function led to the re-

tools which has allowed to define, on a territorial scale, precise relationships also with the strategic choices and specific tactical solutions adopted centuries earlier, in the late-Roman and Byzantine age, for the defence of an area which, in this specific historic region, constituted a real long-term 'structure'. Therefore the comparative study of the structures preserved in the three sites studied with total stratigraphy (buildings, topography, underground structures) – al-Ḥabīs, al-Wu'ayra and ash-Shawbak – documenting Roman-Byzantine occupation phases, made it possible and will allow to shed new light on the interpretation of the whole structure of the same ancient *limes* of the region (see also Kennedy 2000: 175 and ss).



5. Wu'ayra castle, Petra: archaeological readings.

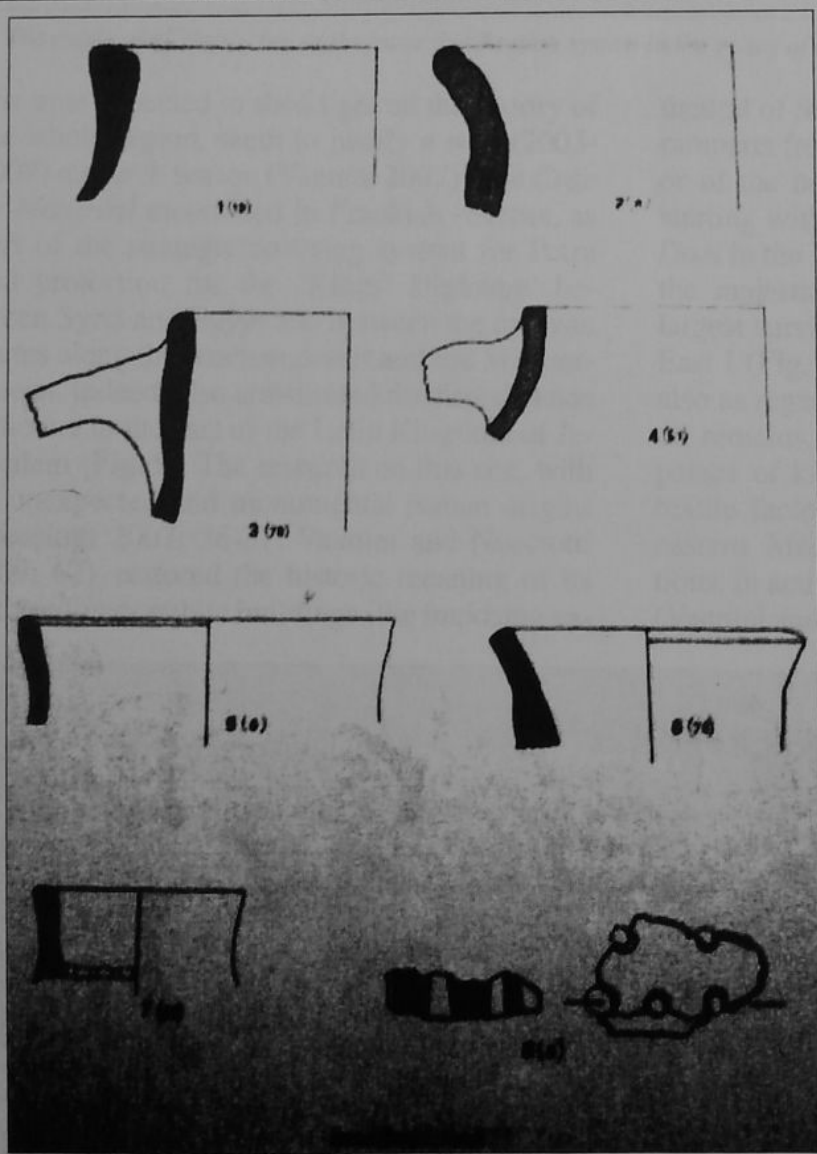


6. Wu'ayra, key of Petra: anti-porta and access system.

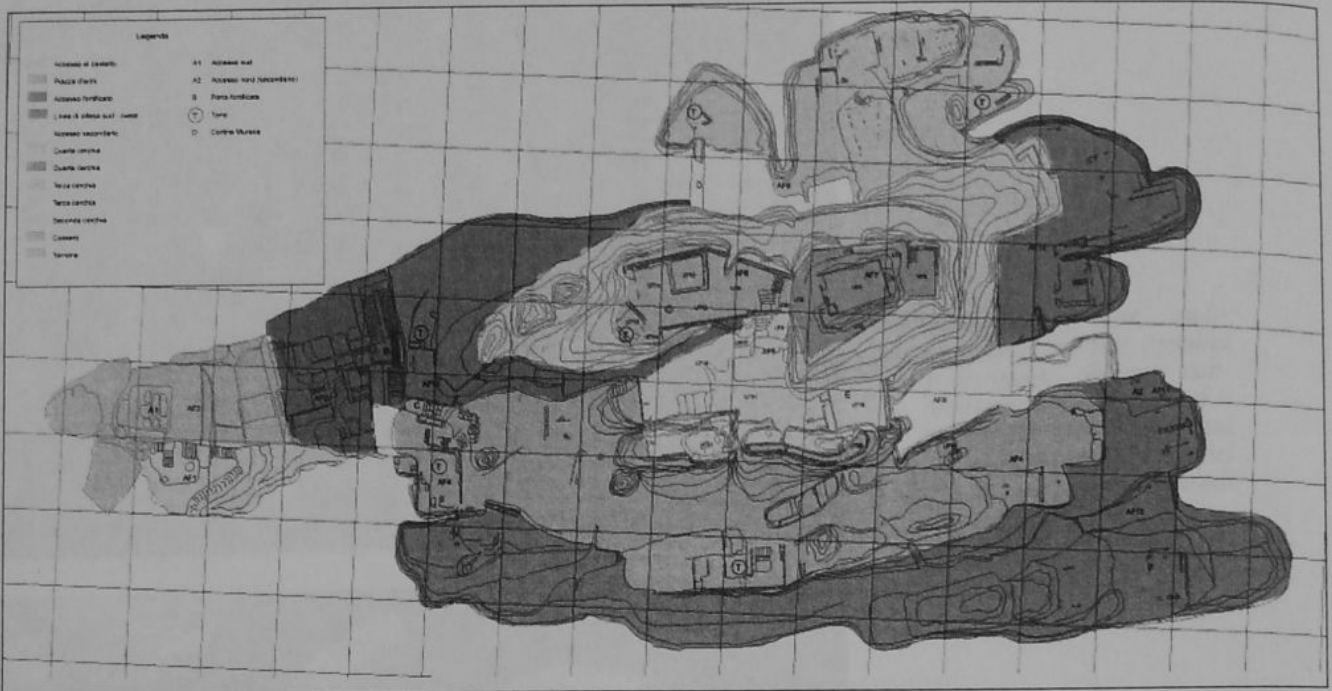
emerging and new interpretation from a 'medieval' perspective, with its own original features, of a whole region, between the Dead Sea and the Red Sea; a 'historic structure' which would no longer be abandoned but, once again, reinterpreted

on different cultural basis by the Islamic rulers (Ayyubid and Mamluk) once they had resettled in the area, after the day of Ḥiṭṭīn.

Only at this point did the choice of ash-Shawbak as new 'stratigraphic observatory',



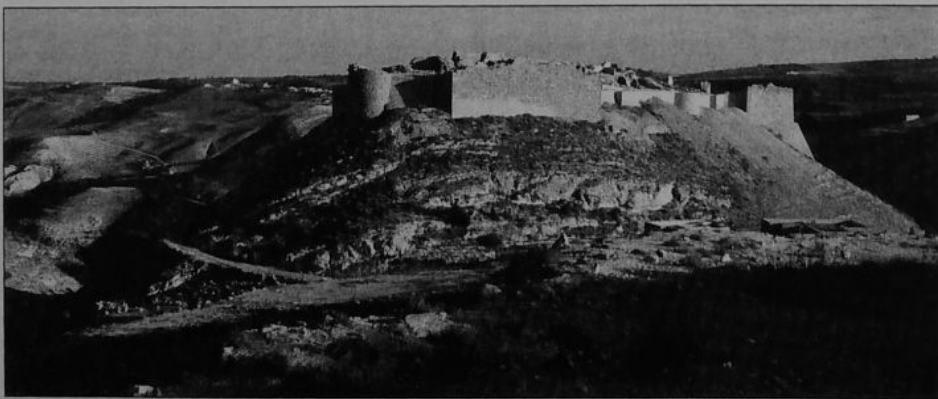
7. Wu'ayra: first ceramic types dated to the region of Petra in sec. XII (exhibition in Petra Forum hotel).



8. The castle of al-Habis, key of the inner fortification system in the valley of Petra. The topography of the defense.

this time expected to shed light on the history of the whole region, seem to justify a new (2003-2008) research season (Vannini 2007). The *Crac de Montréal* mentioned in Frankish sources, as part of the strategic covering system for Petra and protection for the 'Kings' Highway' between Syria and Egypt and between the caravan routes along the Arabian desert and the Mediterranean, indeed, also constituted the first defence structure to the east of the Latin Kingdom of Jerusalem (Fig. 9). The research on this site, with its unexpected and monumental roman origins (Nucciotti 2007: 36-37; Vannini and Nucciotti 2009: 62), restored the historic meaning of its extraordinary public buildings (the imposing ca-

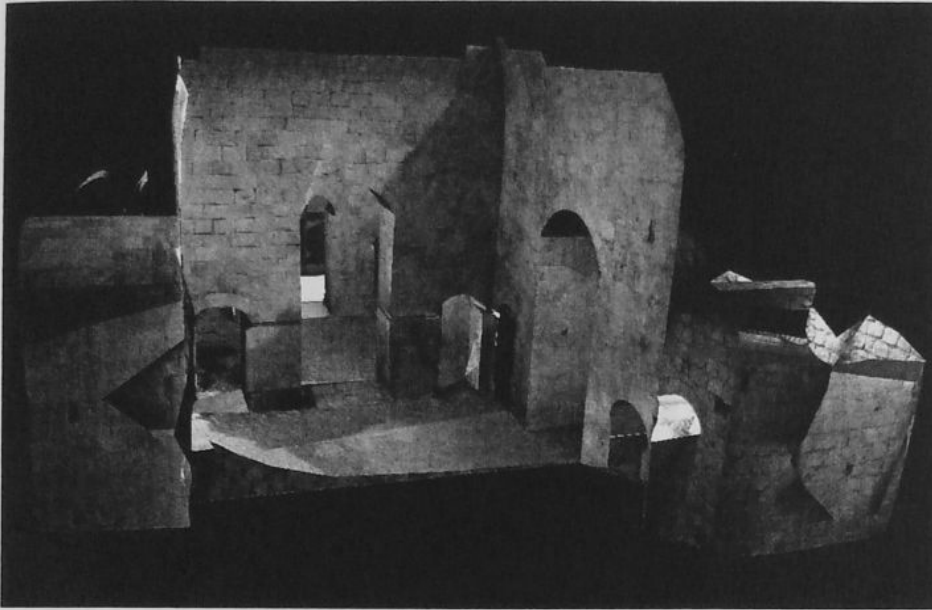
thedral of Saint Mary, the monumental Mamluk ramparts from the end of the thirteenth century) or of the new findings (some of them already starting with the research by R. Brown and the DoA in the 1980s: Brown 1988): among others, the majestic Ayyubid government palace, the largest surviving of that time in the whole Near East I (Fig. 10), showing significant continuity also as regards stratigraphy with the monumental remains, recently discovered, of the earlier palace of king Baldwin I (Fig. 11)⁷; the large textile factory dyeing plant, the largest in the eastern Mediterranean found by the excavations, in activity at least from early Mamluk age (Vannini and Nucciotti 2009: 128-131; see Little



9. The 'Royal' castle at ash-Shawbak: an extraordinary strategic location and tactical choice, to control the fertile strip of the Arabian desert.

7. (See Nucciotti 2007: 41-45; the papers of G. Vannini, M. Nucciotti and M. Rugiadi in Vannini, Nucciotti 2009: 91-94, 111-114, 120-121). A place that represents

a significant environmental continuity of function, even in relation with a territory administered in a substantially similar way to that of the previous crusader Lordship.



10. Ash-Shawbak. The 'audience hall' of the Ayyubid government palace: continuity and innovation of a territorial power (digital 3D photogrammetric model for the stratigraphic readings).



11. Ash-Shawbak. The monumental stairway, discovered in 2006, which connected the vaulted hall of the Crusader palace with the new Ayyubid government palace.

1984, 1986: 83-94) (**Fig. 12**); they were all part of an extensive urban plan set up in the Ayyubid age at the beginning of the XIII century (no later than 1212, according to archaeosismic dating) and continuing for almost a century in the Mam-

luk age, transforming the old crusader castle into a real Islamic city, confirming at the highest level ash-Shawbak's new, original role as political, military, administrative and economic point of reference for the region (**Fig. 13**)⁸. Ash-Shaw-

8. A reading, on a strictly archaeological basis, aimed at reinterpreting also what we have discovered about ash-Shawbak from Arab written sources; the comparison with the Damascus gardens (Ibn Shaddad e Abu Il-Fida in Faucherre 2004: 45, 65), the astonishing figures of thousands of inhabitants between the end of the XIII and the beginning of the XIV century, now appear much less rhetorically hyperbolic (Ludolf di Sudheim in De-champs 1939: 74): of course there is still a gap, but it is self-evident that the category to which they belong is the same: no longer a 'castle' (according to the continental

European feudal culture) but rather a real 'city' (drawing on a culture which was local but, in the long run, Mediterranean). The same applies to European chroniclers, as in the case of the alleged exaggeration by Albert of Aix (RHC-Hoc III, 431): ash-Shawbak built in 18 days by king Baldwin I; this was not believable, at least until the discovery (2006) of the imposing abandoned ancient ruins, actually restored by the same king Baldwin. For an up dated discussion of archaeological data from Karak and 'Aqaba (see Milwright 2008; Withcomb 2006; Damgaard and Jennings 2010).



12. The Mamluk 'industrial' textile dyeing factory (end XIII-XIV century.)

bak, the *de facto* heir, after centuries and for a large section of the region included between

'Aqaba and Karak, of the late antiquity and Byzantine jurisdictions of Augustopolis/Udhruh and, especially, of Petra (Fig. 14). This region, from another perspective, therefore proves to interpret its role as frontier – this time 'within' the Muslim world, between Cairo and Damascus – following models, also confirmed archeologically, which combine their role in the territory to which they belong with a broader Mediterranean outlook (Vannini 2011) (Fig. 15).

On the other hand, it is a known fact that archaeology has always been rooted in its time; the results of the research, also in this case, tend to merge, from a variety of perspectives with the various needs of local society. Therefore the castle of ash-Shawbak, now one of the most fascinating archaeological-monumental areas of the eastern Mediterranean has been the subject of an enhancement plan by the Department of Antiquities of the Hashemite Kingdom of Jordan, which was the topic of a very recent Italian-Jordanian international Agreement for scientific and cultural cooperation between the University of Florence and the DoA, integrating archaeological research, conservative restoration and enhancement⁹.

This seems to be a promising prospect, also

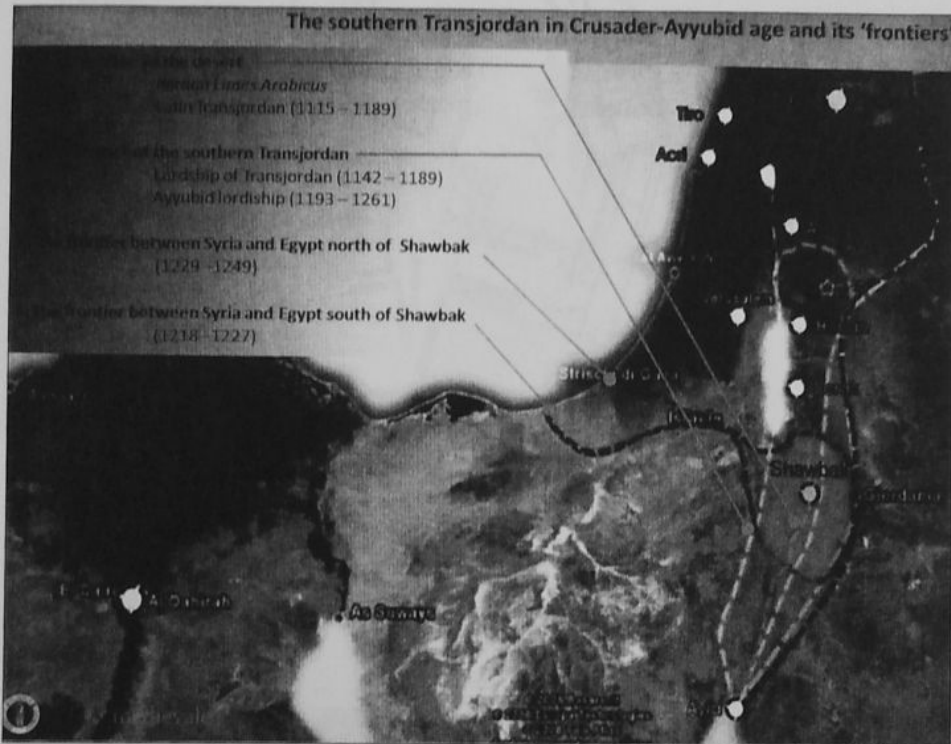


13. The main road axis of the planned new town of early Ayyubid Shawbak (probably early XIII century).

9. Agreement is also in Vannini and Nucciotti 2008: 48-61.



14. The archaeological site of Augustopolis/Udhruh, the legionary camp reorganized in diocletian time and possibly the territorial reference point of the *limes arabicus* since severian time.



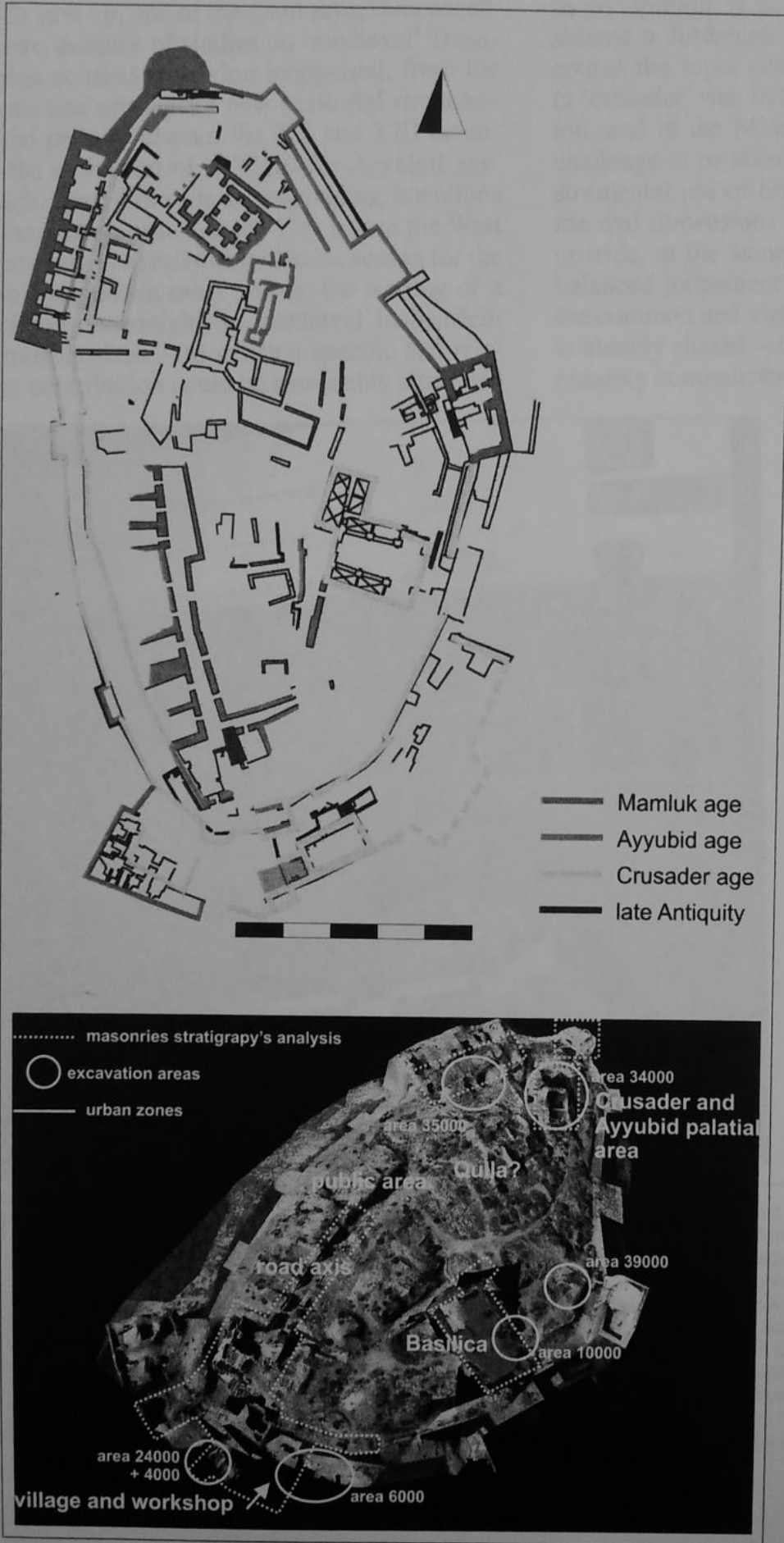
15. The frontiers of 'medieval' Shawbak: between Damascus and The Caire (N/S), after the Crusader-Muslim season (E/W).

beyond the specific scientific research (which over the next few years is expected to be involved especially in the stratigraphic exploration of the new 'town' of ash-Shawbak in the Crusader, Ayyubid and early Mamluk period), in relation to the region and through a collaboration including not only the central role of the

DoA¹⁰ but also local governmental bodies and other institutions in a 'Public Archaeology' programme (Fig. 16); its aim is to make sure that the site, thus radically reinterpreted, is fully part of contemporary management activities; all this will hopefully be introduced in European programmes for territorial development centred

10. I wish to underline the collaborative, friendly and constructive relationship established over time both with the Jordanian authorities and our diplomatic representatives. Just to mention the most recent occasion, the exhibition *Da Petra a Shawbak*, I am first of all grateful to H.M. Queen Rania al-Abdullah of Jordan for the presentation of the Exhibition's catalogue and for her great cultural, and not only, sensibility. I am indebted in particular with the staff of the Department of Antiquities of Jordan through its Director General Dr Fawwaz al-Khraysheh for his commitment and extraordinary efficiency. I am also grateful to the Italian Ambassador in Amman HE Dr Francesco Fran-

soni who, from the very start of his term in office, has showed an attentive, competent and (if I may say so) tactful attitude regarding our mission and the cultural sector (which is often neglected in its role abroad); in this respect I would like to express sincere admiration for the way in which the First Secretary of the Embassy Dr Stefano Stucci has handled his tasks as Cultural Policies Office, even in situations which were not easy. Finally, I would like to express my gratitude and appreciation for the attention with which they supported our work to the Ambassador of Jordan at Rome H.R.H. Princess Wijdan F. Al-Hashemi and to the Minister of Tourism and Antiquities Maha al-Khatib.

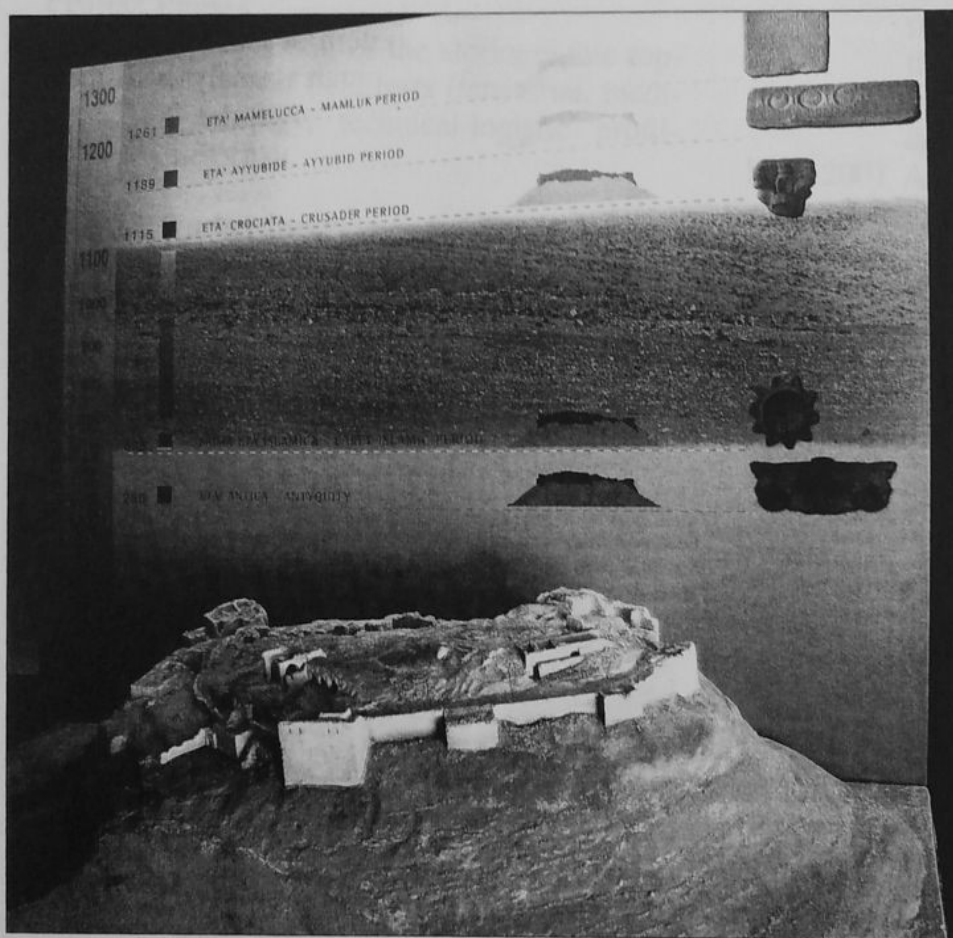


16. Ash-Shawbak: town plan showing the already analyzed buildings and the perspective of the research.

around the direct collaboration between Mediterranean regional communities (Fig. 17)¹¹.

To sum up, one of the main achievements after two decades of studies on 'medieval' Trans-Jordan consists in having recognised, from the events and subsequent new territorial structures of the period between the XII and XIII century, the definition of a 'Crusader-Ayyubid age' which, apart from the corresponding intentions of the protagonists – in the East and in the West – gave rise to a really new historic season for the whole region; in other words, the starting of a tradition – one might say 'medieval' in the Mediterranean sense – to which a specific and relevant contribution could be reasonably attributed

at the root of the current identity structures (the palace of the Saladin dynasty in ash-Shawbak, in my opinion, is now fully entitled to be considered a Jordanian 'national monument'). Of course the topic could also seem 'far-fetched' (a 'crusader' site, in the simplified general opinion, and in the Middle East!); however it is a challenge to be taken up, in favour of a non-instrumental use of history, being convinced that the real dimensions of historic knowledge can provide, at the same time, an independent and balanced judgement about our past, leading to the common and virtuous discovery – because it is already shared – of something complex (and possibly contradictory).



17. International exhibition *From Petra to Shawbak. Archaeology of a Mediterranean frontier* (Florence, Palazzo Pitti, 2009).

11. A European Project for cooperation and support to local development ('CIUDAD'), involving Italian (Tuscany), Jordanian (Municipality of ash-Shawbak) and Armenian (Ararat and Vayots Dzor) regions, which have established a consortium presented following an initiative by our University led by the Tuscan Regional Government (with F.A.R. Maremma, Assogal Toscana), focusing on the economic and administrative impact of the management of cultural heritage in the region and on the exchange of related experiences, has just started. The aim of the project is to foster new local governance and development tools, through a tourist

master plan defined on the basis of research, conservation and enhancement of the historic-archaeological assets. For this purpose, as regards the Jordanian-Italian level, a partnership will be established between the Tuscan Regional Government and the Municipality of ash-Shawbak for the organisation and management of the tourism district, also by setting up an integrated communication system involving the creation of an experimental visitor centre in ash-Shawbak (currently under construction by the Jordanian Ministry of Tourism and Antiquities).

As regards a general interpretation of the results of the mission as a whole, the latter can be considered as the beginning of an important reading which renews and reconsiders the data available so far; a wealth of data will be gathered archeologically and it will be interesting to 'match' them with the very different, and thus possibly complementary, approaches adopted, also from a critical perspective: a methodological aspect which, in itself, seems to be a significant innovation within the general scientific scenario of missions in the Middle East (Fig. 18)¹².

Project Phases

1986-1988 Designing of the storiographic topics and field tests (territorial, methodology, technical-logistic profiling);

1989-1991 Topographical and archaeological survey between Syria and the Gulf of 'Aqaba; First surveys on the Trans-Jordan frontier of the XII century (al-Karak, at-Tafilah, Petra, ash-Shawbak, Ayla, Pharaohs' Island); First excavations in the Petra area;

1992-1998 Archaeological exploration of al-Wu'ayra – recognised as key to the fortified system of Petra – using vertical and horizontal stratigraphy; Start of the intensive exploration of the crusader fortification system of the valley; Software design of the project (first version of the PETRA data system);

1999-2001 Archaeological analysis to the sec-



18. The Florence Conference (Palazzo della Signoria, 2008), dedicated to Trans-jordan in 12th and 13th centuries and the 'frontiers' of medieval Mediterranean.

12. This archaeology-based mission, in fact, has produced historic interpretation models for some basic aspects of the organisation of Mediterranean medieval settlements which were discussed during the recent international Conference (featuring 88 speakers from 43 academic institutions in 13 countries) organized by Florence University with the Municipality and the SUM in Florence on 5-8 November 2008 (Palazzo Vecchio-Palazzo Strozzi). The Conference was dedicated to *Trans-Jordan in the XII-XIII century and the medieval Mediterranean 'frontiers'*, providing the scientific basis for the exhibition *From Petra to Shawbak. Archaeology of a Frontier*, held in Florence (Palazzo Pitti, Limonaia del Giardino di Boboli, 13 July-11 October 2009) following an initiative by the University of Florence, the Department of Antiquities of Jordan and organized by the Soprintendenza per il Polo Museale

Fiorentino with the support of the Ente Cassa di Risparmio di Firenze (www.frontierarcaeology.eu). The Proceedings of the Florence Conference constitute the first volume of a new Series published by B.A.R. of Oxford (*'Limina/Limes. Archeologie, storie, isole, frontiere nel Mediterraneo (365/1556)*); while, just after the Conference and Exhibition and also as a celebration of the 200 years from Jacob Burckhardt's 'discovery' of Petra, a book is being prepared summarizing the 25 years of research of the Mission of University of Florence (*Shawbak, i castelli di Petra e la Transgiordania crociato-ayyubide. Archeologia e storia di una terra di frontiera*, edited by G. Vannini). The text of this paper was translated by Dr Elena Di Concilio (who also designed the simultaneous translation of the mentioned Conference held in Florence).

- ond medieval castle in Petra: al-Ḥabīs; Development of conservation and enhancement programme for the al-Wu'ayra castle and crusader settlement system in Petra;
- 2002-2008 Extending the archaeological analysis to the crusader sites in Petra (al-Ḥabīs, al-Khubtha, Jabal 'Aṭūf) and starting a collaboration on the 'Crusader' period with some international missions: ACOR (Bayḍā), University of Berlin (Wādī Farasa); Stratigraphic surveys in the archaeological-monumental area of ash-Shawbak castle: surveys, extended essays, analysis of the buildings; Drafting of an intervention plan for the conservation and enhancement of ash-Shawbak castle, based on the Agreement between the DoA and University of Florence.
- 2009-2011 Further investigations at ash-Shawbak and its environs; start of targeted investigations on the Crusaders sites in light of new data; launch of a European program of 'Public Archaeology' at ash-Shawbak (CIUDAD).

Project Staff (2002-2008)

Project and direction: Guido Vannini (Dip. di Studi storici e geografici).

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Conservation and restoration: Pietro Ruschi (Un. Pisa).

Computer modelling: Pierre Drap (CNRS-LSIS, Marseille).

Historical analysis: Franco Cardini (SUM, Firenze).

Archaeometric analysis: Roberto Franchi (Lab. Ce.S.Ar., Università di Urbino).

Archaeo-environmental analysis: Paul Mazza (Dip. di Paleontologia).

Survey: Andrea Vanni Desideri (Dip. di Studi storici e geografici).

Topographic modelling: Roberto Gabrielli (CNR-ITABC Montelibretti, Roma).

Archaeo-anthropological analysis: Jerome Rose (University of Arkansas).

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Marcotulli (Dip. di St. storici e geografici, building archaeology), Chiara Molducci (Dip. di St. storici e geografici, survey), Chiara Bonacchi (UCL, public archaeology), Chiara Corbino (Un. di Siena, archaeo-zoology), Dario Rose (topography), Marco Bini (Dip. di Progettazione dell'architettura; architectural analysis), Giuseppe Ligato (written sources), Alfonso Fiorentino (Museo minerario dell'Amiata; website).

Collaborators: Marianna De Falco, Silvia Leporatti, Riccardo Bargiacchi, Lapo Somigli, Giacomo Gonella, Roberta Sciortino, Alessandro Neri, Eugenio Donato (Un. of Calabria), Amer Bdour (DoA; Archaeologist), Francesca Dotti (École Pratique Des Hautes Études, Paris; Islamic archaeologist), Julien Seinturier (CNRS; computer engineer), Micaela Sinibaldi (Un. of Cardiff; ceramologist), Ezio Burri (Un. d. Aquila, speleologic surveys), Enrico Sodi (structural engineer), Ali Mohammad al-Khatib (DoA), Carlo Mocenni, Lodovico Mocenni, (architects), Mauro Foli, Anna Marx (photo documentation), Piero Bruni (assistant archaeologist).

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Project Publications

The mission so far has produced more than one hundred scientific titles concerning the results achieved from Archaeology and cross-disciplinary perspective, as regards both its merit and method, published locally, nationally and internationally; by means of example reference should be made to the following:

Ricognizione

1987 Ricognizione agli impianti fortificati di epoca crociata in Transgiordania. Prima relazione. *Castellum* 27/28: 1-32.

Vannini, G., Desideri, A. V.

1995 Archaeological Research on Medieval Petra: a Preliminary Report. *ADAJ* 39: 509-540.

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1997 Mediaeval Petra. The Stratigraphic Evidence from Recent Archaeological Excavations at al-Wu'ayra. *SHAJ* VI: 371-384.

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