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Challenges Encountered and Changes Envisioned: Learning From the Past 25 Years at Tall al-ʻUmayrī and Imagining the Next 25

Excavations at Tall al-ʻUmayrī, Jordan (FIG. 1) were launched in 1984 as part of the Mādabā Plains Project (MPP), begun initially at Tall Ḥisbān over 40 years ago. The summer of 2008 marked the 12th excavation season at al-ʻUmayri and, with it, a quarter of a century of lessons learned, theories tested, strata unearthed, artifacts exposed, achievements accomplished and technologies employed. This paper will review what al-ʻUmayrī has learned from and contributed to the field, as well as the technologies, strategies and approaches which facilitated these discoveries, thereby exploring the challenges the excavators confronted. It will also look to the next 25 years, outlining significant changes, some already underway, which its directors hope will keep the project close to the cutting edge of Jordanian archaeological research.

As part of the preparation for this presentation, MPP hosted at the Annual Meeting of the American Schools of Oriental Research in November 2009 a "Next Generation" consultation, involving veteran leaders and specialists as well as younger scholars serious about extending MPP's research objectives in Jordan and who stand on the creative cusp of the disciplines tied to archaeological investigation in the southern Levant. Topics up for discussion included (1) an updated, streamlined excavation manual, (2) an enhanced, unified website (madabaplains.org) featuring an entirely digital, integrated application process, (3) a highly sophisticated GPS system and on-site benchmarks, first utilized in 2008, (4) a recently launched, publicly accessible and easily searchable on-line dig database, currently completely up to date with data from all excavation seasons at al-ʻUmayrī, (5) use of recent technology for reconstruction of architectural remains, (6) new theoretical constructs, (7) a possible digital data-collection system, (8) restoration and presen-

1. 2010 Aerial photo of al-ʻUmayrī and environs (David Kennedy).

tation of the site, as well as educational models for informing the public and (9) an updated strategic plan for MPP into the foreseeable future.

Thus, the past, present and future coalesce into a learning trajectory which has carried the MPP in general and al-'Umayrī excavations in particular to their current place in the discipline and hopefully will propel it toward a prosperous and productive future.

Challenges Encountered

History and Anthropology

The early debates about how to define the Ḥisbān excavations – biblical Heshbon or modern Tall Ḥisbān – are well documented and form part of the dramatic shift across the southern Levant in the 1960s and 1970s as excavators grappled with how to integrate biblical issues with their excavations, as well as emerging scientific constructs and approaches (LaBianca 1994). The catalyst for change at Heshbon was the discovery early on that the site was not Late Bronze Age Heshbon of biblical fame. While initially discouraging, this assessment led to a remarkable reinventing of Ḥisbān's objectives at a time of turmoil in the discipline, a movement in the direction of anthropological research based on nomothetic principles and methods intended to explore larger issues like food systems and multi-millennial cyclical patterns in the Levant of intensified settlement or nomadic behaviors. While not replacing entirely excavators' historical objectives and certainly not the rigor of stringent adherence to typological and stratigraphic principles and procedures, these new scientific approaches changed the questions we asked of the data and, thereby, the results.

These discussions have continued over the past 25 years of excavation at Tall al-'Umayrī (FIG. 2), leading excavators there to maintain the search for biblical and historical connections, owing to the biblical education of the directors, but also guiding the research in other directions. With the help of specialists in the fields of geology, prehistory, palaeozoology, palaeobotany, palaeography, palaeoclimatology, lithics, ground stone tools, ceramic technology, textiles production, architectural techniques, human investment in building construction (Clark 2001, 2003), the human dimensions of daily life in the Bronze and Iron Ages (Clark, Herr and London 2004), ethnoarchaeology (London and Clark 1997) *etc.*, the al-'Umayrī excavations attempted to contribute to a wide array of scientific inquiries into social, economic and cultural spheres of life, thereby enriching the project and what it could tell us about subsistence and survival in antiquity.

Early Computer Technologies

Ḥisbān has been recognized for its early use of computers in data control (Moorey 1991: 168; King 1983: 193-194). While still using paper locus sheets for data collection, the al-'Umayrī team faced the growing problem of a computer-driven need for greater specificity in the recording process in order to provide data easily stored and manipulated in a database environment. This forced the project to reshape its database (with thanks to Karen Borstad who adapted an MSAccess database for MPP's use) and, with it, all the protocols and procedures involving the harvest of data from the field. The result: an entirely new excavation manual (Herr and Christopherson 1998), built around the need for greater specificity in the recording process, a step that also allowed for the enlargement of the scope of controlled research (excavation and survey) and for the expansion of data-collection strategies and categories into a more comprehensive approach.

2. Tall al-'Umayrī from the east (Mark Ullom).

Publication of Finds
As with all projects, the al-'Umayrī excavations are confronted with the challenge of publishing finds in a consistent and timely fashion. To meet the challenge, directors for the most part followed the practice established at Ḥisbān of excavating every other year. This schedule allowed time-strapped core staff members with publication responsibilities to keep up with a reasonable publication schedule, under the able direction of Larry Herr who, following the 2008 season at al-'Umayrī, retired from the field to focus on final publications. The burden of publication has now shifted to Kent Bramlett, newly appointed chief archaeologist.

Interdisciplinary Demands / Opportunities
The nature of modern archaeological research requires attention to a wide range of disciplines and specializations if project directors are to draw maximum yield from excavated data. This challenge confronts all projects, especially in view of the financial constraints of mounting expeditions from foreign locations. As noted above, the al-'Umayrī project has been fortunate in attracting specialists from a wide range of disciplines, who have enlarged our understanding of ancient lifeways and survival strategies. At present, while benefitting from specialists in various fields, the project is looking for assistance with metals preservation and research, as well as some of the emerging lines of inquiry using more sophisticated technologies in biology, chemistry and physics.

Preservation, Restoration and Presentation
Given the emphasis over the past two decades on cultural resource management in Jordan, as in much of the Middle East, archaeological projects face the challenge of funding efforts to consolidate excavated walls, preserve exposed remains, conserve artifacts and present sites to the public for educational purposes and tourism. The clash of scholarly agendas and the economics of tourism has created tensions and will likely continue to do so. Tensions have been minimal at al-'Umayrī until now, because protecting the extremely well preserved architectural remains from the EB IA, MB IIC, LB IIB, E Iron I, L Iron I and L Iron II / Persian periods (noted below) serves both the project's research design and at the same time provides easily accessible and nicely distributed visual representations of remains from these time periods. With the close co-operation of the Department of Antiquities in the late 1990s, the infrastructure and part of the superstructure of the 'four-room' house was restored, giving visitors an informative introduction to daily life during the transitional LB II / E Iron I period (FIG. 3). Issues linked to land ownership have hampered further efforts, but hopefully these can be resolved.

3. Partially reconstructed 'four-room' building at al-'Umayrī.

Passing the Torch

Archaeologists come and go, creating challenges of consistency and continuity in the carrying out of archaeological research. In part owing to the foresight of Siegfried Horn and Lawrence Geraty, who worked to train and facilitate future generations of archaeologists in the tertiary educational system of which Andrews University and La Sierra University are a part (as are Canadian University College, Walla Walla University *etc.*), and in part to a large field-school system which has been an integral part of all MPP projects, nearly 1,800 people have participated over the past 40 years. While consistently looking for ways to enhance the educational experience of university students in particular, the projects are at the same time advancing their own research agendas as well as that of Jordan's Department of Antiquities.

Results Excavated

In the face of these challenges and in part as a result of responses to them, Tall al-'Umayrī has been generous in what it has taught us about the Bronze and Iron Ages in Jordan (FIG. 4). The approaches developed at Ḥisbān and honed through twelve seasons at al-'Umayrī have proved their worth, even if our research is not complete nor our methods comprehensive. With still more to learn, we can nevertheless be confident in several assertions about the site and what it can tell us about life and survival from *ca.* 3,000 to *ca.* 150 BC in the central highlands of ancient Transjordan. At present, with the conclusion of 'Phase I' excavations (1984 - 2008), we can now define 21 distinct occupational strata (FIG. 5). Among the major finds:

Early Bronze IB Dolmen

The al-'Umayrī dolmen on the lower south-eastern slope of the *tall* is remarkable for several reasons (FIG. 6). It is one of only a handful of the thousands of dolmens along the Mediterranean and Atlantic coastlines in which were found remains of any kind. al-'Umayrī's dolmen produced twenty skeletons and twenty artifacts (Herr In press: 31-32). Especially unique is a series of plastered use surfaces surrounding the dolmen, likely constructed for ceremonial visits to honor the ancestors interred here. Also distinct are the foundational remains of a two-room structure evidently used in connection with the dolmen, perhaps by those visiting from long distances away.

Middle Bronze IIC Defense System

Consistent with other MB IIC defense systems in the southern Levant, the defenses at al-'Umayrī were massive and extremely well constructed (FIG. 7). A deeply carved dry moat at the western base of

4. 2010 Aerial photo of al-'Umayrī acropolis excavation fields (David Kennedy).

`Umayri Stratigraphic Chart
1984-2008
[Adapted from *NEA* 72/2: 70]

Stratum	*Period*	*Date (ca.)*	*Fields*	*Finds*
	Neolithic	9000-4500 BC	E and W slopes	Flint scatters
	Chalcolithic?	4500-3300 BC	East valley	Sherds on surface
Hiatus	EB IA	3300-3200 BC		No remains so far
21	EB IB	3200-3000 BC	K	Dolmen and associated surfaces and structure
20	EB II	3000-2600 BC	D	Wall fragments above bedrock
19	EB III	2600-2300 BC	CDG	Houses and streets on terraces on S and N slopes
18	EB IV	2300-2250 BC	D	Ephemeral one-room houses widely separated
17	EB IV	2250-2200 BC	D	Small walls of cobbles, perhaps animal pens
Hiatus	EB IV-MB IIA-B	2200-1650 BC		No remains so far; cemetery east of the airport highway
16	MB IIC	1650-1600 BC	BC	Sherds in Field B rampart; wall fragments and floors
15	MB IIC	1600-1550 BC	BCK	Moat, rampart, wall fragments, floors, and cave tomb
Hiatus	LB I	1550-1350 BC		No clear remains so far
14	LB II	1350-1230 BC	BF	Temple/palace, terrace wall
13	LB II/Iron I	1230-1200 BC	B	Sherds in Field B rampart
12	LB II/Iron I	1200-1150 BC	ABFH(L?)	Perimeter wall and houses, walls fragments
Hiatus	Iron IA	1150-1100 BC		Typological difference between pottery of Strata 12 and 11
11	Iron IB	1100-1050 BC	AH	Wall fragments
10	Iron IB	1050-1000 BC	AH	House with rooms and floors, courtyard sanctuary
9	Iron IIA	1000-850 BC	ABH	Few red-slipped, hand-burnished sherds, courtyard sanctuary
8	Iron IIB	850-600 BC	A	House
7	L Iron II/Persian	600-550 BC	ABCEFHL	Administrative complex and houses, well, sanctuary
6	L Iron II/Persian	550-500 BC	AH	Major changes to administrative complex, houses, sanctuary
5	Persian	500-400 BC	AH	Domestic wall fragments, sanctuary, Persian provincial seals
Hiatus	Late Persian	400-200 BC		No remains so far; possibly also very early Hellenistic
4	Hellenistic	200-50 BC	HLK	Pits, farmstead, tomb with Greek inscription
3	E Roman	50 BC- AD 135	AB	Ritual pool, probably part of a farmstead or villa
Hiatus	L Roman	AD 135-350		No remains so far
2	Byzantine	AD 350-650	F	Farmstead wall fragments and pottery
1	Islamic	AD 650-present	ABCDEFHL	Sherds in topsoil from Early Islamic, Middle Islamic, Modern

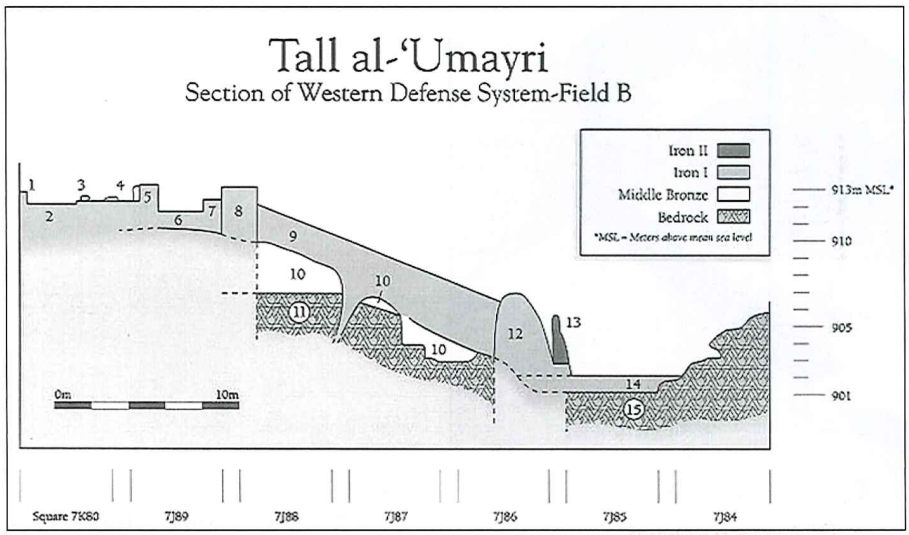
5. Al-'Umayrī strata chart 1984 - 2008.

6. Al-'Umayrī dolmen on lower south-eastern slope of *tall*.

the tell provided the first major obstacle to those attempting to assault the town. This was attached to a steep (35° slope), well surfaced, beaten-earth rampart which crested at the escarpment of the acropolis and dropped down into the settlement.

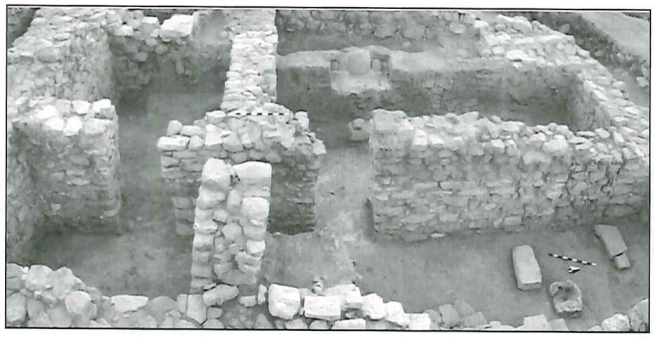
Late Bronze IIB Building

Striking for its presence in central Jordan during this period and for its level of preservation, al-'Umayrī's Late Bronze Age building in the north-west corner of the acropolis has added to the remarkable and remarkably well preserved architecture at the site (FIGS 8 and 9). With some walls still standing over 3m high, the five-room structure

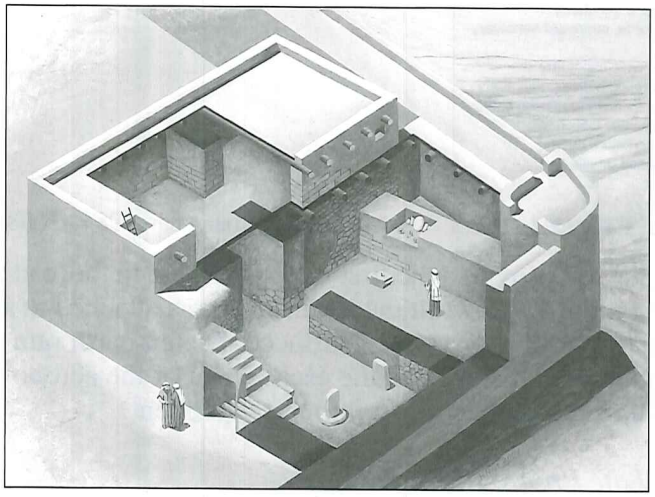


7. Section of al-'Umayrī defenses - MB IIC includes dry moat and rampart layer 10.

served either a palatial or temple function, perhaps both. The two southern rooms contained no remains, leaving their function a mystery; there was a second storey to these two rooms, known from the mudbrick detritus that filled the ground-floor rooms and the stairway built on the eastern side of the building. But the entry hall, central room and a small back room were all clearly cultic in use. Standing stones in the entry hall and in a niche in the western 'installation' wall of the central room, which contained five standing stones as well as cultic vessels, combined with a presentation altar and crude clay figurines, some stored in the small *favissa*, all argue for this structure having a primarily religious use (Bramlett 2008; Herr and Clark 2009: 80-81; Clark In press).



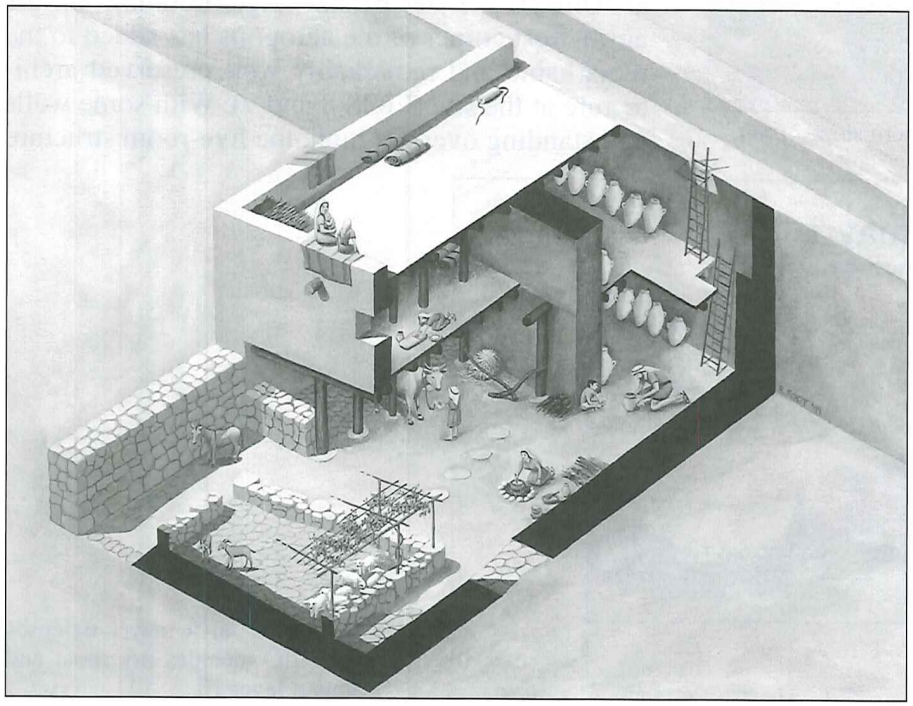
8. LB building.



9. LB building cutaway painting by Rhonda Root.

Transitional Late Bronze / Early Iron I Domestic Quarter

The signature architectural find at Tall al-'Umayrī, a 'four-room' or 'pillared' building which appears to be domestic in nature (FIG. 10), has been supplemented by three additional recently excavated buildings, all joined by common walls along and abutting the inside of the town's western perimeter wall and all preserved remarkably well owing to a massive destruction which left the buildings protected by second-storey mudbrick detritus. By the end of the 2008 season, two of these buildings had been exposed for some time with an emerging third building whose southern wall lines sur-



10. 'Four-room' building cutaway painting by Rhonda Root.

faced that summer. The 2010 season revealed a fourth contiguous building in this line, as well as an additional 'four-room' building from perhaps 50 years later, constructed with interior 'quoin-and-pier' walls, from a field nearby. The buildings (FIG. 11) produced large collared pithoi, grinding stones (two massive examples), ceramic and other artifacts suggesting traditional domestic use. While material remains in the three buildings south of the 'four-room' house fit well standard domestic wares and quantities, the 'four-room' building contained 75 large pithoi, leading Gloria London to suggest that al-'Umayrī served as a feasting center during this period (London 2009). However, given the preponderance of evidence suggesting domestic function, we likely have here the major building in the neighborhood, perhaps even a clan leader's house (Herr 2009).

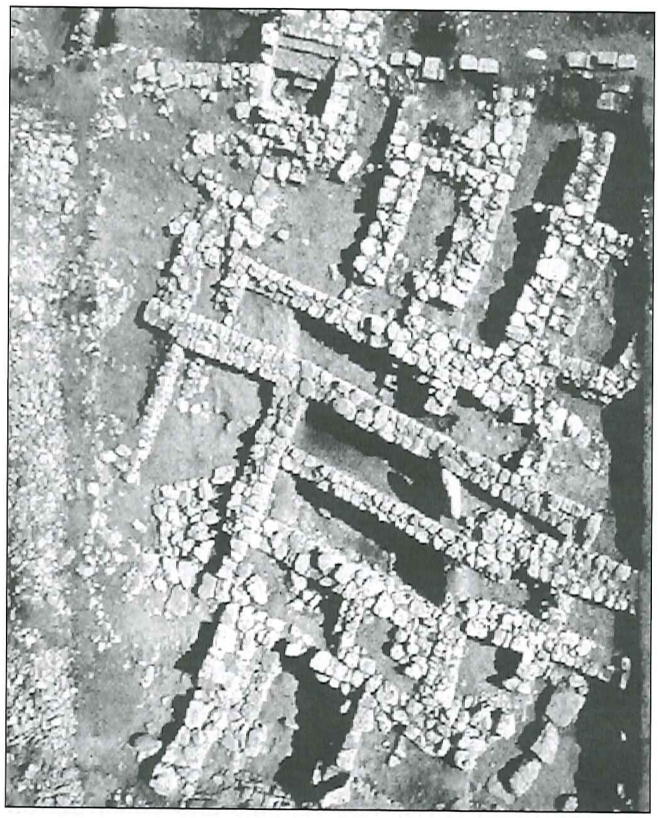
Late Iron I / Early Iron II Courtyard Sanctuary

Occupying a prominent place near the south-western corner of the tell, the Late Iron I / Early Iron II courtyard sanctuary emerged over several seasons of excavation (FIG. 12). Its size and construction suggested an open-air precinct without the benefit of roofed enclosure space. Over time, surfaces of earth / clay overlaid with cobbles and plaster needed repair, demanding repeated re-layering operations. From between these layers were excavated the fragments of several architectural models (model shrines – FIG. 13), indicating that they had been preserved in the surface renovations.

11. Transitional LB II / E Iron I domestic buildings along western perimeter wall (left).

12. Courtyard sanctuary partially excavated and interrupted by later walls.

13. Model shrine from between cobble layers.



14. Administrative center, basement level.

Late Iron II / Persian Administrative Center and Domestic Remains

Known from the earliest seasons of excavation at al-'Umayrī, the large administrative complex held center stage at the site during the sixth century BC (FIG. 14). It was the location of the discovery of the now famous "Baalis" seal impression which provided the throne name for one of the later Ammonite kings, Ba'al-yasha', mentioned in the Bible in Jeremiah 40:14. It also appears to have served as the administrative hub of a large farming system, possibly for the distribution of wine.

In addition to the administrative center, this period also revealed a number of domestic structures. Some were characterized by 'quoin-and-pier' wall construction, but not all. There also appeared to have been some kind of cobbled plaza or courtyard surrounded by buildings, at least one of which was domestic in nature, to the east of the center. Further east, along the southern escarpment of the acropolis, several rooms emerged, one of which contained an almost complete *ṭābūn*. Adjacent was a building containing an industrial olive press, with three massive stone weights and a pressing stone.

Hellenistic Farmstead

Apparently the only feature on the site in the second century BC, a farmstead was constructed, consisting of at least two long rooms adjacent to each other. Domestic artifacts, including hand-made juglets, dominated the remains (FIG. 15); agricultural activity was suggested by the presence of storage pithoi.

Changes Envisioned

The question confronting us at this point has to

15. Hellenistic farmstead ceramic assemblage.

do with what those of us engaged in the Tall al-'Umayrī excavations have learned from colleagues in the field, from past challenges and our experience responding to them, from field excavations extending back, for most of the directors, for 40 years, from the changing technological landscape and from fresh theoretical constructs, and how answers here might help us shape the project for the next 25 years. This is a daunting task, but a necessary one if we anticipate keeping up with the field and contributing to it as well.

As noted above, MPP directors convened a "Next Generation" workshop at the 2009 Annual Meeting of the American Schools of Oriental Research, held in New Orleans. Intentional about ensuring a future for the past, we laid out an agenda calculated to build on past successes by reviewing basic MPP principles and then eliciting input from newly minted PhD graduates, as well as from graduate students and specialists, whose developing acquaintance with newer technologies and theoretical constructs could help us transition more completely to the 21st century. This was an extremely fruitful exercise, which we followed immediately with a meeting of MPP dig directors and MPP-affiliated institutional administrators to envision a long-term future in which MPP projects would continue to enjoy the support of consortium institutions and, in addition, to enlarge the institutional base of support. Subsequent conversations have consolidated our resolve to maintain momentum in the direction of this generational shift and cemented our institutional affiliation commitments to the longevity of MPP.

One illustration of this resolve to engage the next generation of scholars appeared in the transition between the 2008 and 2010 excavation seasons at al-'Umayrī. The average age of field supervisors in 2008 was 39; in 2010 it was 27. Whereas 80% of the field supervisory staff were male in 2008, 100% were female in 2010. Three of the latter are graduate students at Berkeley, Chicago and North Carolina and three, while experienced excavators, first became field supervisors in 2010. Our small-sized excavation team of 40 participants, while economically challenging to put together, gave these new supervisors the opportunity to grow into expanded roles and responsibilities. They have all produced excellent field reports.

Changes already underway and / or envisioned for implementation in the near future include:

Upgrading Computer Technologies

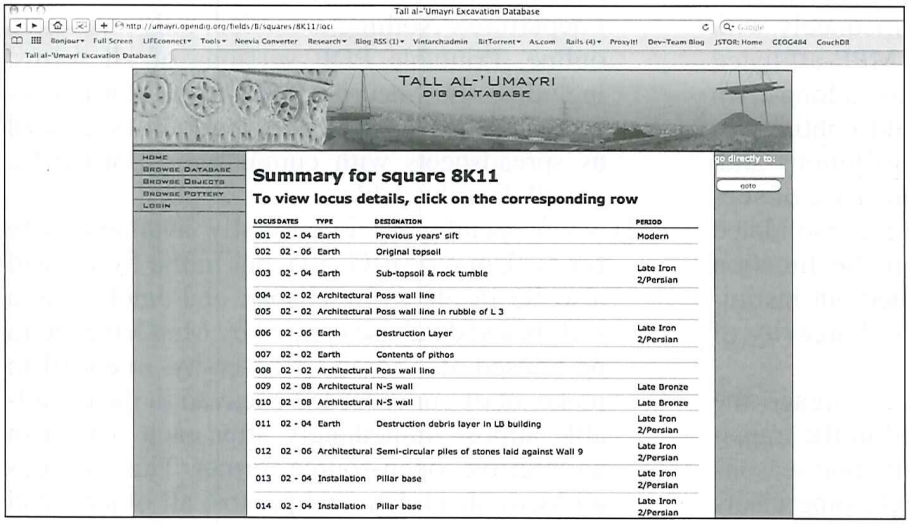
The MPP projects are considering a central computer guru who, based at one of our institutions, could facilitate most or all of our computer-related upgrades. However, the costs of funding such a position are prohibitive. In spite of this challenge, we have developed or are developing computer capacity in a number of areas:

(1) www.madabaplains.org has been in place for several years, but is undergoing a major renovation (FIG. 16). It has become the major portal for all MPP projects and will provide access to pages of common interest to all projects and home pages for Ḥisbān, al-'Umayrī and Jalūl, as well as additional MPP sites which may be opened in the future. Each of the three websites will contain similar, but site-specific pages on research, reading lists, general information about Jordan, medical recommendations, illustrated reports from past seasons *etc*. Of special importance are site-specific digital participation forms (security, application, medical, assumption of risk, code of conduct and arrival / departure). Nothing is mailed, only submitted online. Printable PDF versions of all forms, including the Security Form in the format required of the Department of Antiquities, as well as spreadsheets with cumulative information, are all downloadable.

(2) www.opendig.org is currently available only for al-'Umayrī (FIG. 17), but in the future will also be in place for Ḥisbān and Jalūl. It is a web-based database created by Matt Vincent, to be housed at Andrews University, intended to make all of our recorded excavation data available almost immediately after each season in an intuitive, open-source format. This includes all locus sheet data and photos, all objects and artifacts and, in time, all drawings. While for years Jordanian archaeologists had hoped for a common platform for comparative analysis of archaeological excavation data from around the country as well as the ancient Near East, this dream has not materialized as hoped. Opendig.org promises for projects using MPP protocols new possibilities for collaborative research.

(3) Digital data collection with an iPad was attempted in one field in 2010; our next season will involve iPads in all squares. The technology is advanced sufficiently for data storage and access to internet-based databases to make

16. New www.madabaplains.org web-portal.



17. www.opendig.org website.

these devices feasible for field use. The system is being designed for immediate uploading of field data to opendig.org, but with the layered protection of several filters so that the chief archaeologist, Kent Bramlett, oversees what field supervisors input and field supervisors oversee what square supervisors and volunteers enter.

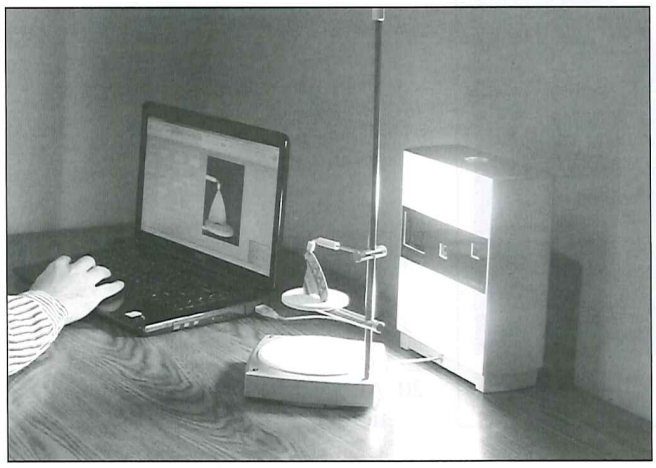
(4) Excavation manual changes are now required to meet data-entry demands from both opendig.org and digital data harvesting. Each new technology forces adaptations in related technologies and protocols. The revised manual will be primarily web-based, although a limited number of updated print versions will likely be produced. The digital manual will not only include explanatory text and recording forms, but also embedded video clips shot by videographers during the 2008 season to illustrate procedures and processes being described in the manual.

(5) A Matlab 3D scanner (FIG. 18) for pottery and small objects is being purchased for use in documenting not only objects, but especially ceramic samples. Software currently available can produce publishable plates of pottery draw-

ings from the 3D scans.

(6) A ProMark 3 GPS mapping system (FIG. 19) on loan from the Jalūl excavations has been used over the past two seasons at al-'Umayrī with excellent results. With this technology, we have now corrected a magnetic compass error of nearly 5 degrees, bringing all new fields into alignment with true north, and have also corrected 'grid-drift' resulting from twelve seasons of architectural and topographic drawings produced by various members of the staff over a period of 25 years. Accuracy to 1cm or less, aided by the installation of three benchmarks on the site, allows us to bring our site records to a new level of detail and definition.

(7) GIS integration of our data is within reach, but has not yet been accomplished at al-'Umayrī. It is a top priority.



18. Matlab 3D scanner (Owen Chestnut).

19. Matt Vincent and Bob Bates operating ProMark 3 GPS system.

Enlarging Cultural Resource Management Capacity

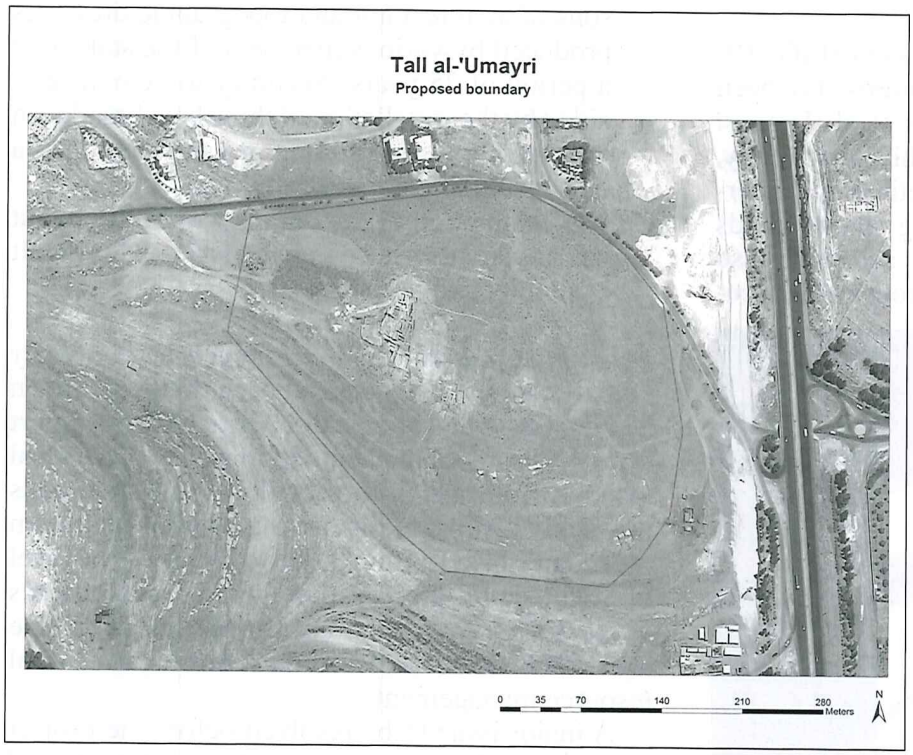
Tall al-'Umayrī is situated adjacent to the 'Ammān National Park and almost directly across the airport highway from Ghamadan National Park, an ideal location from which to provide for the thousands of weekly visitors to the parks an outdoor museum of Jordan's history from 3,000 to 150 BC. The level of architectural preservation from several periods at the *tall* is unique among Bronze and Iron Age sites. Thus, it demands our best efforts at cultural resource management.

A major issue to be resolved before the project can transcend seasonal consolidation of walls and occasional attempts to preserve and present portions of the site is land ownership. We have excavated for 25 years because of the generosity of the current land owners, but their investments in the property have been on hold for a long time. With the use in 2010 of the ProMark 3 GPS system, our team marked out the boundaries of what we feel should be preserved for future research and presentation purposes (FIG. 20). The area encompassed is ten hectares with a value of several million dinars. We are currently working with a number of options, but all are constrained by the immense costs involved. Plans for a 'four-room' house visitors' center at the western base of the *tall*, viewing stands located on site and off, and interpretive trails await resolution of ownership issues.

Enhancing Scientific Technologies

Some projects in Jordan have demonstrated immense capacity in their exploitation of recent scientific advances. At al-'Umayrī and in La Sierra University labs, we have made progress and look forward to expanding further our capacity. Several projects deserve mention:

(1) aDNA analysis on skeletal remains from the 'four-room' building is in progress by La Sierra student Meagan Miller under the supervision of La Sierra biologist Lee Greer. Of the four in-



20. Al-'Umayrī boundary for preservation.

dividuals represented by 200 bone fragments (an adult male, another adult, a teenager and a child), three have yielded aDNA evidence. The question of relationships among the individuals should be resolved soon.

(2) Analysis of pithos ceramic samples has been accomplished by La Sierra student Canty Wang (under the supervision of Loma Linda University geologist Kevin Nick) by means of an emissions spectrometry which demonstrated variations in the clays used in the construction of a single large storage jar.

(3) Cooking pot residue analysis by means of gas chromatography (GC/MS) and phytolith analysis (GC-C-IRMS) is currently underway by Mary Larkum of the University of Massachusetts at Amherst to examine vegetable and meat fat components of Iron Age diets to see what they indicate about food and ethnic identities.

(4) Spectrographic color coding with the use of a hand-held device is being developed for field use in order to provide consistent and accurate Munsell colors for soils and finds.

(5) Elemental trace analysis by means of X-ray Fluorescence will be undertaken during our next field season with a new hand-held device in the care of La Sierra University chemist Jennifer Helbley.

Improving to Maintain Best Practices in the Discipline

As the discipline of archaeology in Jordan continues to grow and expand, the al-'Umayrī project intends to keep pace and contribute to the discussions. Enhancement of stratigraphic, typological and analytical practices, enlarging of publication opportunities, expanding of interpretive paradigms and constructs, and enriching of collaborative efforts all carry the promise of a productive future in the field.

Conclusion

Madaba Plains Project excavators, especially those who have invested the past 25 years in the recovery of al-'Umayrī's considerable cultural heritage, are deeply indebted to long-term friends in the royal family of Jordan (in particular, HRH Prince El-Hassan bin Talal and HRH Princess Sumaya El-Hassan bin Talal) and the Department of Antiquities of Jordan, good colleagues among dig directors in Jordan and their teams, Jordanian university collaborators, specialists in a wide range of disciplines, home-based institutional and private supporters, and the core staff and volunteer participants over several decades of research. Belonging to this large and distinguished family of professionals and informed lay persons is a grace for which we are eternally grateful. We have learned important lessons about

and have hopefully also contributed to the development of state-of-the-art research technologies and protocols. We also look forward to participating in Jordanian archaeology long into the future, contributing to best practices in excavation techniques and technologies, and in cultural resource management.

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