

NEWSLETTER

VOL. 36 / 2016

Faculty of Archaeology and Anthropology
Yarmouk University
Irbid-Jordan
Postal Code: 211-63

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Yarmouk University Press

ISSN 1021-5174

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EXCAVATIONS AT TELL DAMIYAH, 2015

Zeidan Kafafi and Lucas Petit

The sixth season of the joint Jordanian-Dutch excavations Project at Tell Damiyah started on October 4th and will continue until the 5th of November, 2015. This project is a joint venture of the Yarmouk University and the Dutch National Museum of Antiquities, with the co-operation of the Department of Antiquities of Jordan, and under the direction of Prof. Dr. Zeidan Kafafi and Dr. Lucas Petit, respectively. Mr. Ziad Ghunaimat acted as the Department of Antiquities of Jordan representative.

TELL DAMIYAH

The archaeological site of Tell Damiyah (Fig. 1) is situated in the Zor, directly south of the confluence of the Zerqa and the Jordan River (Lat. 32.1040000915527, Lon. 35.5466003417969). The site is surrounded from three sides by Katar-hills (the Ras Zaqqum, the Sha'sha'a and the Damiyah Katar) and located 500 meters east of the Jordan River. Across this river, at the western side, are the Jiftik and the Marj en-Na'jeh belonging to the Nablus district in Palestine. Tell Damiyah is considered the

most southern Iron Age settlement in the Jordan Valley, and close to other occupations like Jericho, Tell Nimrin and Tell Hammam. The site covers an area of approximately 3 hectares at the bottom and has relatively steep slopes all around, rising approximately 17 meters above the recent walking surface. It consists of two parts, the upper tell and a lower terrace that occupies the western and southern sides. Especially the upper Tell has a strategic position and overlooking today the Prince Muhammad (General Al-Linbi) Bridge over the Jordan River. In addition, it dominates the N-S road through the Jordan Valley and the E-W road connecting ancient Ammon with the Wadi Far'ah. The area in which the site is situated is very fertile and well irrigated.

SIXTH SEASON (2015) EXCAVATIONS

Two areas were opened during the 2015 season and are as follows:

- 1) Area A, the summit of the Tell (Fig. 2):

Fig. 1: General view of Tell Damiyah.





Fig. 3: An animal figurine excavated in 2014.

2) Area B, the Lower City at the western foot of the Tell:

The co-directors of the Tell Damiyah decided during the 2014 season to explore the nature of occupation at the Lower part of the City. They were invited to do so by the results of the other excavations located in the Jordan Valley, such as Tell Mazar and Tell es-Sa'idiyyeh, where cemeteries belonging to the main site were encountered. Thus, two squares were opened in 2015 at the western foot of the site to investigate the possible existence of a so-called “lower town”. The work resulted in the discovery of several graves of unknown date, and evidence of an industry using fire. No built-up structures were detected, but it is too early to conclude a complete absence of any lower settlement.

To conclude, the co-directors suggest that Tell Damiyah was a significant and international centre for worshipping during the late Iron Ages (around 700 BC) along two major trade routes and close to one of the few fords crossing the Jordan River.

ACKNOWLEDGEMENTS

The co-directors of the project would like to thank the Department of Antiquities of Jordan, represented by His Excellency the director general Dr. Monther Jamhawi for his continuous support and facilitating all difficulties to achieve the main goals of the project. Thanks are due to the Dutch National Museum of Antiquities and the Yarmouk University who financed the project.

The co-directors were privileged to have an excellent team and appreciated the work of all locals who helped on the excavation and in the house. As always, it was a pleasure to stay at the Deir ‘Alla Archaeological Studies Station, so we would like to express our thanks to Yarmouk University for housing us.

TEAM OF 2015

The team members are the following: Zeidan Kafafi (co-director), Lucas Petit (co-director), Zeyad Ghunaimat (DoA representative), Jeroen Rensen (area supervisor and physical anthropologist), Hendrik Uleners (area supervisor), Yousef al-Zu'bi (photographer), Muwaffaq Bataineh (area supervisor, surveyor and draughtsman), Sophia Tews (square supervisor), Yannick Bojwinkel (square supervisor), Diedrik Malbertsma (square supervisor), and Mariette Grimbergen (housekeeper).

INTERNATIONAL TEAM WORKS ON DHARIH ARCHAEOLOGICAL STAFF IN THE FACULTY OF ARCHAEOLOGY AND ANTHROPOLOGY STOREROOMS

Zeidoun al-Muheisen and François Villeneuve

A team of scholars, Post- and under-graduate students were working from April 26 till May 19, 2016, in the Faculty of Archaeology and Anthropology/Yarmouk University, preparing elements of the final publications of Khirbat adh-Dharrah excavations. That study season was prepared in spring 2015 by a short evaluation season conducted in the storerooms by a smaller team, resulting into a several years plan, to study the whole artifacts of Edh-Dharrah and prepare them for publication.

Dharrah is a major Nabataean and Roman site, it has been occupied during the Pottery Neolithic A, Early Bronze III-IV, Middle Bronze, Iron Age II, maybe Hellenistic, Late Byzantine, Umayyad, and Late Abbassid/Fatimid periods. The site is located in the magnificent Wadi al-La'ban between Wadi al-Hasa and Tafilah. The Dharrah field program, directed by al-Muheisen from Yarmouk University and Villeneuve from IFPO and Paris 1 Pantheon Sorbonne University. The work included a survey, huge and long-term excavations, impressive architectural restorations, as well as works for local tourism. It lasted from 1983 (the first survey in the site) until 2013 (the last season of excavations). Thirteen major seasons of excavations 1984-2007 were conducted, in addition to short seasons in 2008 and 2013. Two major exhibitions presented Dharrah to the public were made in 2000 at the Museum of Jordanian Heritage/Yarmouk University, and in 2002 in Greater Amman Municipality. In addition, the Dharrah sculptures and objects were

masterpieces of the major exhibition on "Petra and the Nabataeans" which travelled in 2003 and the following years to New York, Cincinnati and other cities in North America. Currently, reconstructions of the major series of Dharrah reliefs are part of the «Nabataean Hall» in *Jordan Museum* in Amman, together with potteries and altars, and a number of other impressive finds exhibited inside or in front of the University Museum at Yarmouk University.

The 2016 team (Fig. 1) was active first on the site at Dharrah itself, since it is necessary at least every six months to evaluate the situation there, due to the fact that the permanent monitoring of the ruins by the Department of Antiquities cannot be perfectly accurate due to lack of staff and funds, which explains the permanent continuation of severe clandestine excavations, mainly in the Southern necropolis (Nabataean through Umayyad). This year, the team's visit discovered a series of tombstones uncovered by the robbers; one of them (Fig. 2) is particularly interesting since being first a Nabataean «*nefesh*» (triangle representing the deceased's soul) type tomb-stone, then a Christian 6th or 7th century AD tombstone with incised a cross. In addition, before or after the Christian cross, three lines of a probable Semitic inscription were inscribed, perpendicular to the verticality of the stone. That important remain was delivered to Mr. Imad al-Droos, head of the Department of Antiquities in Tafilah, and stored there. The difficult Semitic inscription is under

preliminary study both by Dr. Omar al-Ghul and Dr. Hani Hayajneh, from the Faculty of Archaeology and Anthropology at Yarmouk. Generally speaking, a better protection of Dharih (and nearby Tannur) makes it necessary to conduct a long-term work program with the local people in Wadi al-La'ban and with neighbors from the Tafilah Region, a major task for future years.



Fig. 1: The international team.

In the storerooms of the faculty, the team continued the thematic storing (by type of stuff, by area of excavations, finally by sub-area and by year of excavation) and conditioning of the huge quantities of Dharih stuff: sculpture fragments or complete blocks, decorative stuccos, potsherds — or restored vessels —, glass vessels, steatite vessels, stone tools, animal bones, human bones, sample for vegetal remains, etc.. At the end of the season, the Dharih collections are stored in only seven locations of only five storerooms, much less scattered than earlier, and some materials, like animal bones, stuccos, architectural fragments, are now almost correctly brought together. This work was done mainly by Villeneuve with Mussa Serbel, a senior member of the conservation and restoration lab, who also was active in the restoration of several big Umayyad storage jars, helped by BA student Raghad al-Khalailah, who spent hours every week with the team learning pottery reading, drawing and restoration.



Fig. 2: The Nabataean «nefesh» type tomb stone.

Senior French archaeozoologist Dr. Hervé Monchot, a familiar of prehistoric to modern fauna from many archaeological sites in Jordan, Palestine and the Arabian Peninsula, worked for years on the determination of animal bones—which he already started in 2015. Among the important results is the confirmation of the quasi-absence of camels there (only 2 fragments found till now, among thousands): a surprise for that site close to the main caravan road of the Inner Levant; and the presence of horses, together with cows, in the stables of the center of the Umayyad-period estate there (inside and near the former Nabataean Roman temple). Few of the «animal» bones collected by the excavators are actually human bones. Some of them are from recent graves but some others are displaced from graves from carrion-eaters, or whatever else, and all need careful examination. Their study was started by Dr. Mohammad al-Russan, a physical anthropologist at the Faculty of Archaeology and Anthropology/Yarmouk University.



Fig. 3: A plate of African Red Slip ware.

Dr. Jerome Rohmer, an experienced field archaeologist active in Southern Syria, Dharih, Madain Salih and now coleader of the Thaj program in Saudi Arabia, and a specialist of the 1st millennium BC wares in the Levant, checked the whole of the post-Neolithic and pre-Nabataean sherds noticed in all Dharih contexts. This study leads to completely new views: the Early Bronze (probably III and IV) levels are confirmed, but more broadly developed than was thought — present actually below every buildings of the higher parts of the site, and even possibly beneath the temple; the Middle Bronze, never suspected, could be presented. The Iron Age II (Edomite), symmetrically, is much more limited than it was thought. Finally, and quite surprisingly, the mixed material collected in fills near the so-called V10 Nabataean oil-press seem to reveal the presence of possibly Persian and secure Hellenistic presence. On the whole, Dharih sequence would be by far the most «complete» (relatively!) sequence of the whole of Southern Transjordan!

Paris 1 PhD student Laura Vié started the huge task of study and publication of the late Byzantine / Umayyad pottery from the 6th-8th century AD site. Though the village in that period, being limited to the northernmost area of the Roman sanctuary, is much smaller than the Nabataean-Roman sanctuary and village abandoned in 363 AD *ca.*, that stuff is by far the largest amount of pottery from all periods. Vié, who is already familiar with Palestinian stuff (East Jerusalem,

Sabastiyah, etc.), concentrates first on the subject of her PhD, *i.e.* cooking ware, with additional looks to the storage ware. But she pays attention to table ware too, and there she did important discoveries, noticing the presence of at least two plates of important luxurious *African Red Slip* ware (Hayes shapes 67 [Fig. 3] and 97), quite possibly dating back to the 5th century AD (!), one coming from building V1, a large luxurious Nabataean-Roman house overlooking the temple (!) — thus not at all inside the perimeter considered to be that of the byzantine village. These observations, if confirmed, would broadly change the frame of Dharih history: there would be no real gap in the 5th century AD, and the village, at least V1 units, would not have been destroyed and abandoned after the 363 AD earthquake.

Finally, a Warsaw PhD student Piotr Makowski (under supervision of Prof. Waliszewski, a famous specialist of late antique mosaics and oil-presses in the Near East, a former Dharih excavator now leading major programs in Shhim and Jiyah in Lebanon), studied in his dissertation the reuse of late antique structures in medieval times in Southern Jordan, started the fascinating study of the abundant latest pottery of Dharih: common ware, crude, un-wheeled, certainly «home-made», and mostly unpainted. This is discovered in the same areas as the Byzantine and Umayyad remains, but at considerably higher levels — after an early medieval earthquake — and associated with extremely crude and poor housings. Due to the scarcity of painted decoration on the pottery, Dharih staff considered, for decades, these levels as being «late Mamluk» or even «early Ottoman». Actually that late dating was made impossible by three successive series of C14 dating, in Belfast and in Paris: on charcoals, on charred seeds, finally on animal bones — all giving calibrated between late 8th and early 11th century AD. Makowski is starting the study on the basis of that «Fatimid» dating, in close connection with some results recently collected by American colleague

Micaela Sinibaldi in Islamic Bayda and on Jabal Harun near Petra.

All members of the team are extremely happy and proud to renew and continue that

old and friendly cooperation dealing with one wealthiest heritage site of the whole Levant.

STABLE ISOTOPES IN ARCHAEOLOGICAL SCIENCE CASE STUDIES FROM JORDAN

Khaled Al-Bashaireh

INTRODUCTION

Stable isotopes have become increasingly useful in archaeological investigations over the past few decades. Because stable isotopes are incorporated in different types of materials including living tissues, glacial ice and shells found in different environments, scientists have applied the study of stable isotopes to a broad assortment of questions. These topics include reconstruction of paleoclimatic patterns (Thompson et al. 2000, Stevens 2001), paleodiet (Schoeninger and Moore 1992, Macko et al. 1999, Richards et al. 2000), paleoenvironmental conditions (Shea 2001) and provenance studies (Herz 1987).

ISOTOPES: DEFINITION

Isotopes are groups of atoms that have the same atomic number (protons) but different numbers of neutrons (i.e different mass numbers; sum of protons and neutrons); however, they have the same chemical properties (Faure 1998). For example, the atomic number for carbon is six, but carbon atoms can have mass numbers of 12, 13, or 14 indicating that it has three isotopes: ^{12}C , ^{13}C and ^{14}C , respectively. Some isotopes are radioactive or unstable (like ^{14}C) that decay periodically over a period of time proportional to their half-life; consequently, they are helpful for certain dating methods.

Other isotopes are stable that do not decay (like ^{12}C , ^{13}C), and these are helpful for the above mentioned studies. In this short essay, I focus on the utility of these stable isotopes in archaeological science studies in Jordan in the past decade.

STABLE ISOTOPES USED IN ARCHAEOLOGICAL INVESTIGATIONS

For the purposes of archaeological investigations, the most commonly used stable isotopes are carbon (C), nitrogen (N), oxygen (O) and more recently, strontium (Sr). Stable isotopes are measured by a mass spectrometer which separates the isotopes based on their weight and expressed in a ratio of the least abundant to the most abundant isotope: $^{13}\text{C}/^{12}\text{C}$, $^{15}\text{N}/^{14}\text{N}$, $^{18}\text{O}/^{16}\text{O}$ and $^{87}\text{Sr}/^{86}\text{Sr}$. Often, the ratios of isotope abundances (except $^{87}\text{Sr}/^{86}\text{Sr}$) are reported using the delta notation in per mil or parts per million. The standard for each isotope is different: for example $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ are expressed relative to the Peedee Belemnite or (PDB), a marine limestone (Sealy 2001).

Because carbon fractionates due to photosynthesis in plants; the lighter isotope in the plant community diffuse faster than the heavier ones (Schoeninger and Moore 1992). Therefore, plants are enriched in ^{12}C compared to ^{13}C or have lower $^{13}\text{C}/^{12}\text{C}$ ratios than the soil or the air. Plants that

photosynthesize along the C3 or 'Calvin-Benson' pathway have the most negative $\delta^{13}\text{C}$ value (Faure 1998), while tropical grasses that utilize the C4 or 'Hatch-Slack' pathway have less negative $\delta^{13}\text{C}$ values (Sealy 2001). Because of this photosynthetic discrimination, carbon isotopes are useful in paleo-studies of environment, climate and diet since C3 and C4 plants often grew in environments of different climates.

Nitrogen isotopes fractionate due to nitrogen fixation by certain bacteria and soil microorganisms, while denitrification occurs mostly in the oceans due to strong selection for ^{14}N , causing the oceans to be enriched in ^{15}N . Consequently marine $\delta^{15}\text{N}$ values are more positive than terrestrial ones (Sealy 2001). Carbon and nitrogen isotopes are measured on the same samples of animal (or human) remains (such as bone, teeth or hair) and interpreted using both results.

The ratio of $^{18}\text{O}/^{16}\text{O}$ at any given time is temperature dependent. Fractionation occurs when ^{16}O evaporates from the surface of the ocean leaving the ocean enriched in ^{18}O . During cold periods, ^{16}O is precipitates and preferentially stored (enriched) in ice at the poles leaving the marine environment further enriched in ^{18}O . The $\delta^{18}\text{O}$ of rainwater is therefore a useful proxy for climate (Sealy 2001). Oxygen isotopes are measured in animal remains as well as ice cores and deep-sea sediments (Green 1995).

CASE STUDIES FROM JORDAN

Stable isotopes have been applied to different aspects of archaeological science including palaeoclimate, palaeodiet and provenance research. The material and isotopes investigated depend on which question is being asked.

A- PROVENANCE INVESTIGATION OF ARCHAEOLOGICAL MARBLE

In the past decade several articles were published on marble provenancing. For instance, Al-Bashaireh (2011) investigated

the source of white, green and red marble samples collected from architectural elements of the octagonal building at the ancient Decapolis city of Gadara (Umm Qais), northern Jordan. The octagonal building was dated to the Roman times and was used in later periods.

Stable isotopes of oxygen and carbon, among other parameters, were used to investigate and assign the provenance of the samples. The isotopes were measured by a mass spectrometer and compared with databases reported for the main white and colored marble sources of the Mediterranean used in antiquity (Figs. 1a and 1b). The isotopes in the databases are separated into different fields which are essential, although overlap, to differentiate between the quarries. Because of the isotope overlap of some ancient sources, other analyses were necessary to differentiate between them. The study concluded that most of the studied white marbles are probably from Proconnesus (Turkey), whereas Naxos and Thasos (Greece) are minor sources (Fig. 1a). The most probable source of the green marble "cipollino verde" is Karystos (Greece), while the red marbles probably come from Iasos (Turkey) (Fig. 1b).

Similarly, Al-Bashaireh and Bedal (2015) examined the source of white and green marble samples uncovered from the Petra Garden and Pool Complex (PGPC), south Jordan. The isotope results indicated that fine-grained white marbles show one sample from Carrara (Italy), two samples from the Paros-1 (Greece), seven samples from Penteli (Greece), and two samples from unknown sources (Fig. 2). The medium-coarse-grained white marbles were one Naxian (Greece), two Thasian-3 (Greece) and three are Paros-2 (Greece), while the green marble is most likely Cipollino Verde from Euboea (Greece). Recent work of Al-Bashaireh and Lazzarini (2015) gave similar results.

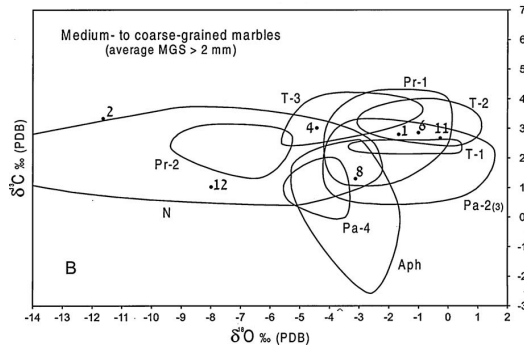


Fig. 1b: The isotopic determinations $\delta^{18}\text{O}$ – $\delta^{13}\text{C}$ compared to isotopic regions of the main Mediterranean ancient marble quarries. T: Thasos (T-1: Fanari district; T-2: Aliki district; T-3: Vathy-Saliara district); D: Docimium (Afyon); N: Naxos; Pa: Paros (Pa-1: Lychnites variety; Pa-2: Chorodaki valley; Pa-3: Aghias Minas valley); Pe: Penteli; C: Carrara; Pr, Marmara (Pr-1, main marble; Pr-2, marble from Camlik area); Aph, Aydin.

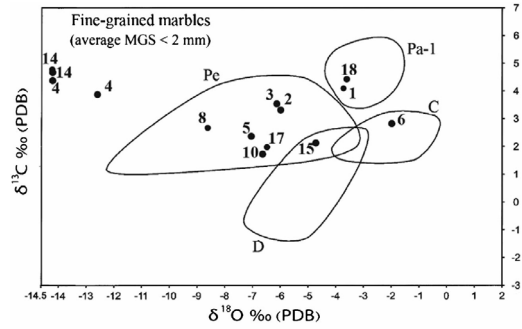


Fig. 2: Carbon and oxygen stable isotope signatures of PGPC white marble samples compared to fields of the major ancient quarries of fine grained marbles: C= Carrara, Pe= Penteli, D= Docimium, Pa-1= Paros (1).

B- PALEOCLIMATE RECONSTRUCTION

Al-Shorman, Al-Bashaireh and Bani Doomi (2011) investigated the paleoclimate of north Jordan during the Roman and Byzantine periods. This part of Jordan was occupied extensively during these periods; therefore, a question was raised to reconstruct its paleoclimate and examine its role in people's adaptation to climate changes. The method comprised the use of stable oxygen isotope analysis of human tooth enamel collected from four archaeological sites (Natfieh, Sa'ad, Yasieleh, and Waqqas).

The $\delta^{18}\text{O}$ values of human dental tissues, which reflect changes in the $\delta^{18}\text{O}$ value of body fluids, are mainly controlled by the isotopic composition of drink water (Koch et al., 1989). The results showed that the rainfall ranged between 31.27–47.26 mm/month during late antiquity in northwestern Jordan and was lower than the current range. The authors explained the success of these sites to adapt these unfavorable climate conditions in circumstances and sustain self-sufficient economy (Natfieh and Waqqas) or prosperous economy prompted by internal or external trade (Yasieleh and Sa'ad).

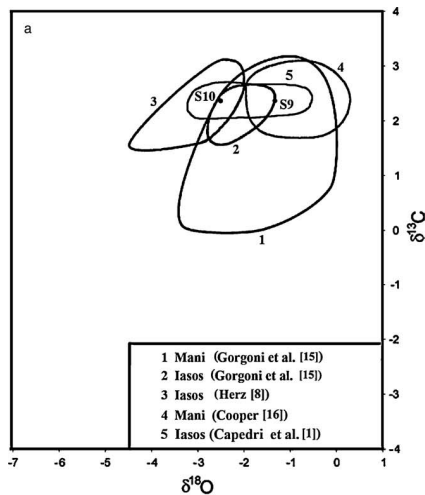


Fig. 1b: Plot of isotopic determinations of red marbles on the isotopic regions for Mani and Iasos.

PALEODIET RECONSTRUCTION

Al-Bashaireh et al. (2010) utilized nitrogen and carbon isotopes of human teeth and bones that were ^{14}C dated to the Early Roman period from Natfieh, north Jordan to investigate its palaeodiet. The results (Fig. 3) indicate that protein from C3 plants or animals that consumed C3 plants (terrestrial animal proteins, e.g. meat, milk, dairy products, and eggs) were the diet of Natfieh people. The authors explained the isotope evidence presented by the individuals of Natfieh that they depended on local agriculture and animal husbandry for their diet and, consequently, subsistence economy. The data agree with what is known that Roman's diets depended on plants while sea food was common for elite members of the society.

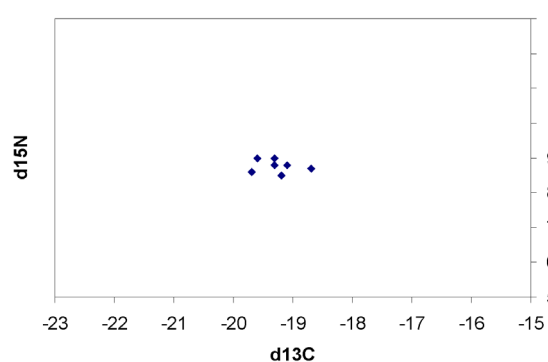


Fig. 3: Distribution of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values.

Another study by Al-Bashaireh and Al-Muheisen (2011) examined the diet and subsistence strategies of Tell al-Husn, northern Jordan. Stable isotope analyses of carbon ($\delta^{13}\text{C}$) and nitrogen ($\delta^{15}\text{N}$) of human teeth and animal bones, uncovered from chambers of a shaft tomb, were examined and dated to the Early Bronze Age III (EB III) or/and the beginning of the Early Bronze Age IV (EB IV) and the Middle Bronze Age I-II (MB I-II) periods. The results suggested a higher social status or different environmental conditions for the individuals of one chamber compared to the individuals of the same age of other chambers (Fig. 4). The double shifts

in $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values might indicate a subsistence strategy of the inhabitants of Tell al-Husn that 1) relied more on pastoralism than agriculture during the first stage of the Middle Bronze Age, the MB I period; consequently, their diet was dominated by animal protein compared to plant protein and 2) an increase in the consumption of terrestrial plant protein and C3 diet during the EB III/early EB IV and toward the end of MB I - MB II. Therefore, it is probable that pastoralism declined and agricultural activities increased during the MB II period and toward the end of the MB Age.

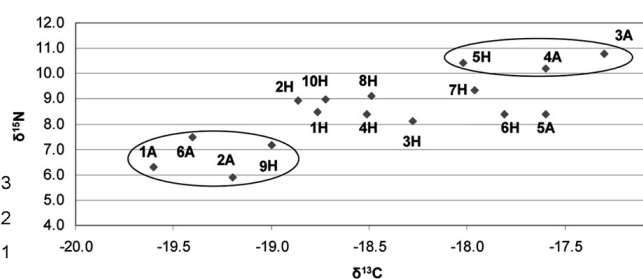


Fig. 4: Distribution of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ values of animal bones and human teeth, the isotope values of the EB III/early EB IV individual sets within the isotope values the animals that feed on C3 plants (the lower ellipse) and the isotope values of the sheep that feed on milk (the upper ellipse). A = animal, H = human.

CONCLUSION

The above case studies prove the importance of using stable isotopes in archaeological science studies in Jordan. These case studies (among others) have shed light on different aspects of important archaeological subfields including paleoclimate, paleodiet and marble provenancing.

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**TRAJECTORIES OF ARAB YOUTH
FROM UNIVERSITY TO WORK AND FAMILY
JOINT PROJECT WITH GEORGETOWN UNIVERSITY-USA**

Abdel Hakim Al Husban and Fida Adely

For over a decade, the question of the Arab youth bulge has captured the imagination and concern of policy makers, researchers and development experts in the Arab world, as well as within the international arena. With an overwhelmingly youthful population in all of the Arab states, youth have been the subject of much public debate and policy-making efforts. The substance of this public discourse on youth has ranged from concerns about alienated youth and links to extremism, to concerns about the development challenges posed by the youth “bulge”, the most preeminent challenge being that of youth unemployment, and its presumed links to issues of educational quality. With the political events of the 2011 Arab Spring, renewed interest in youth as political actors has also emerged, underlined by consistent concerns about education, employability and economic development in the region. Although current demographic projections point to the end of the youth bulge in the next 10-15 years, the effects of the current demographic realities will be felt for decades.

A review of the relevant literature reveals a wealth of quantitative research about the status of youth in the region. The data generated through these efforts provide a broad view of some basic demographic trends in the region among youth with a particular attention to trends in education and employment, with an attention to gender differentials and to a lesser degree, economic inequality. The field has been well studied from this perspective. In addition, quite a

number of attitudinal surveys have been conducted with samples of youth in the region and/or in particular countries, in an attempt to gauge the attitudes and perspectives of young people on a range of political, cultural and social issues. What has been absent in this data-generation and analysis is more rigorous intra-national data that disaggregates youth by class, geography and a host of other factors (one exception is the work of the economist Ragui Assad and his colleagues in Egypt) and data that tracks youth over time. Even thinner is the on the ground, ethnographic and qualitative research needed to capture the interplay of complex structures—cultural, political, and economic—shaping the possibilities and perceptions of young people in the region as they embark upon adulthood.

The proposed project seeks to address these gaps in the existing research about youth in Jordan. Through an interdisciplinary lens and a mixed-methods approach, researchers will investigate the life trajectories of youth in Jordan currently enrolled in post-secondary education institutions—both traditional four-year universities and two-year community colleges or technical institutes. This project is unique both in its scope and methodology. In this way, the research will be comparative temporally, regionally and demographically.

The primary questions that this research is concerned with are as follows:

- How has education shaped the skills, resources and perspectives that young people bring to their “life-making” projects?

- How does their family history and current family situation shape their opportunities and perspectives?

- What are the perspectives of youth on the economic situation in their countries and the region?

- What do youth envision to be the available pathways to a quality life, building a family and upward mobility?

- How do they envision their future?

- How and where are students (as well as graduates and school leavers) seeking employment? What are the pathways to different types of work? Here, researchers are interested in the interplay between academic major, skills, type of educational institution, personal connections, religion, class and gender. In addition, we want to learn more about perspectives on geographic mobility and migration.

- How are young people thinking about marriage, family and potential marriage partners?

- Do they envisage leaving their country to work in another Arab or foreign country after your graduation? If so, what are the reasons?

- What forms of civic engagement are students engaged in? How does this change over time?

- Are young people interested in entrepreneurship? Who tend to be their role models?

Using a broad approach from different disciplines in the social sciences to study the lives of university graduates in the region, the researchers will track the progress of research participants over time—in their first-year of post-secondary education; in years three, five and 10. In the initial phases, researchers will conduct a survey among a sample of students in at least two post-secondary institutions in each country. Researchers will also conduct several focus groups at each institution. The core research questions will then be addressed through in-depth qualitative interviews with a subsample of students (30-40) of diverse backgrounds. These interviews will be the focal point of the research, and this group of young people will be interviewed in subsequent years. In addition, members of their family will also be interviewed at phases of the project. This field research will be grounded in historical and archival work that examines changing perceptions of youth as a life stage, as well as views about education.

CONSERVATION OF TANGIBLE AND INTANGIBLE PROPERTIES OF THE BEDOUIN TENT (*BAIT ASHA'OR*) IN JORDAN

Wassef Al Sekhaneh

The following lines of verse, attributed to Maysoun, wife of the Umayyad Caliph, Mu'awiyya (D. Chatty, 1986):

A tent that flutters in the wind is more comfortable to me than a great palace. Morsel of food in the dish from my tent is tastier to me than a chunk of bread. The sound of the wind coming from all sides is more pleasant to me than the plucking of tambourine.

This study is based on fieldwork was carried out between 2012 and 2014, in *Umm eljammal* in the northern Badia, *Aljaffer*, and *Alhosainiah* in the southern Badia. The aim of this research is to study the socio-cultural and anthropological contexts of the Tent as intangible object which generates and defines the tangible importance parameters. Jordanian Bedouins organized their lives and their houses through the whole meaning of the tent, both substantial and insubstantial to conserve culture and nature of the tent, both definitions are spatially and temporally cannot be separated, they are doped and overlapped. Furthermore, it concentrates on the entanglement of natural and cultural heritage, both are populated with indigenous people. The cultural role of old materials in the Bedouin life is also investigated to conceptualize the new ones. This research focuses on the precautionary principle of conservation of Bedouin culture in Jordanian Badia by focusing on both sense of the tangible and the intangible tent, taken into account the shift of architectural styles, and settlement patterns from old traditional dwelling to modern house dwelling. In entirety, the article discusses the relationship

between the conservation of nature and the conservation of culture, in the context of intangibility and tangibility of the heritage, as example the Bedouin black Tent. The four concepts, honour, dignity, decency and respect still govern and rule the mentality of the Bedouins, and this is reflected clearly in their own modern houses using the tent as a model.

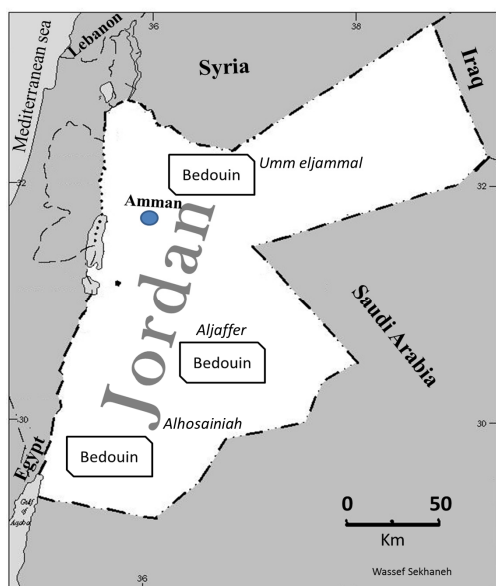
INTRODUCTION

The Hashemite Kingdom of Jordan is situated on the east bank of the river Jordan. It is bordered by Iraq in the east, Saudi Arabia in the south and east, Palestine in the west and Syria in the north (Map 1). The territory of Jordan covers about ninety two thousand square kilometers. 80 percent of the Jordanian area is arid. Most the Bedouin are settled this area (Group; IBP, 2012).

Jordan is usually described as a tribal nation-state ruled by a tribal leadership dominated and abided by tribal affiliations and loyalties. Bedouins constituted and continue to constitute a large segment of the total population. Over the years, the government and Bedouin tribes have developed a unique symbiosis. The government has depended several times on the tribes and Bedouin elements in the army to crush external as well as internal enemies. This symbiosis, however, came after a period of hostility in the early days of the nation-state (Anderson, 2009; Layne, 1994; Massad, 2001; Shryock, 1997; Wilson, 1990; Zein, 2006).

This article will describe the relationship between the Bedouins and their environment in the Jordanian state. This starts from their

dwellings of the Bedouin's Tent to stone house. It concentrates on the concept of the Bedouin traditional tent as a quite complex choice in its social and cultural context.



Map 1 shows the location of the Bedouin studied regions in Jordan.

This study is based on fieldwork carried out between 2012 and 2014, in *Umm eljammal* in the northern Badia, *Aljaffer*, and *Alhosainiah* in southern Badia all located in Jordan and, on a study of published ethnographic sources on Jordanian Bedouin society. The aim of this research is to study the socio-cultural anthropological contexts of the Tent as intangible which generates and defines the tangible importance parameters in which people in Jordanian Bedouins are organized their lives and their houses, and to explore to what extent anthropological concepts apply to these data through the whole meaning of the tent, both substantial and insubstantial to conserve culture and nature of the tent, both definition are spatially and temporally cannot be separated, they are doped and overlapped. The concept of intangibility become tremendously significant in heritage studies, particularly concerning intangible practices and debates over authenticity (Churchill, 2006), (Silverman, 2011). The concepts of tangible and intangible

heritage are intimately linked, intangible heritage per se has received much recent attention with passage of UNESCO's Convention for the Safeguarding of the Intangible Heritage in 2003 (Ruggles, 2009a). The three villages are selected to represent the three types of Badia in Jordan, the southern, quasi southern and northern region.

The interaction of Bedouin in their nature and culture is high; on the agenda is concern about people's impact on the natural environment, in the 20th century, most conservation efforts were based on romantic notions of pristine wilderness (Stevens, 1997), (Dawn Chatty & Colchester, 2002). To conserve both nature and culture one has to understand the interference between the culture and the nature in the Jordanian Badia to empower the indigenous people to conserve their ecosystem.

Family and tribal customs sometimes surpass the civil and personal law implemented by the government. They play a significant role in people's everyday lives and their interactions with bureaucratic and judicial procedures, focusing on the wholeness of the system rather than on its individual characteristics, but this system is becoming more and more stable with the modern state. When a crime or a dispute (killing, accident, honor etc...) occurs, both the civil law and tribal law work hand in hand to reach a settlement. In most cases, the tribal law takes care of the problem before civil procedures even take off. The tribal law by the Bedouin is the balanced scorecard which takes account of "honor", "decency", "dignity" and "respect". Bedouins are governed by the tribal law, and the tribal law is essential for an understanding the Bedouin culture and norms. The interaction of Bedouins are determined by concepts of "honor", "decency", "dignity" and "respect", and so an understanding of the aforementioned four concepts is a prerequisite for understanding the relationship among the Bedouins, therefore the previous four concepts are formed and shaped the Bedouin identity which conceptualized the form of the country state

(Abu-Lughod, 1999; al-Sekhaneh, 2005; Katakura, 1973; Murray, 1923; Stewart, 1990; Thomas, 2003; Watkins, 2014; Zilberman, 1995). None of the previous four values can be measured separately or independently, these values have the ability to help the Bedouins to organize their life.

National identity construction and interest in Jordan has always been intermingled with other forms of collective identity and tribal representations such as pan-Arabism, pan-Islamism, and tribalism, all bear the witness of fort and fortification of natural and cultural heritage of the country. Thus, local patriotism or tribe belonging has competed against other local, regional, and trans-regional identities, whether national, religious, or otherwise. The existence of such countless forms of identification is not peculiar to Jordan; it is indeed common to many other countries in the Middle East like Syria Iraq Saudi Arabia. These constituent elements are not mutually exclusive, for they often overlap and complement one another; they are cumulative feature of Jordanian Bedouin culture. The priority and significance given to each of these forms of identity by individuals is therefore rooted not only in the tribe interests, but also in the movements that can be understood in relation to the historical and political climate dominant at a particular time and space, the Bedouins today have to shift from the glocalized state to other globalized, they have to move from hair house (Tent) to stone house with their intangible properties.

The tribe constitutes a shielded time-space that offers protection to those who stay within it. Hence, one of the worst crimes in the Bedouin society of Jordan is to “blacken a man’s face by breaking “the law of the Tent” (*haqq elbait*) or cut the face (*taqtee alwajeh*), i.e, by injuring a person who is shielded by its protection. The proverb derived from the "black" tent used by Arab tribes is from the recent past.

The Bedouin Tent as a tangible structure is called *bait asha'or lit*. "Hair house". It is woven from goats' hair by the senior woman of the *bait* on a simple drop spindle (*maghzal*), interrelated the main ethical notions, honor, decency, dignity and respect. The tent is owned by the woman (*sahbat el bait*) as her individual personal property. It is undoubtedly from this meaning that the term *bait* was adapted to refer to the stone house as well (al-Sekhaneh, 2005).

In order to interpret, understand, explain and verify the architecture and the valuable meaning of the permanent Bedouin houses and or permanent domiciled population, one must first examine the forms and meaning of the traditional Bedouin housing, i.e. the tent in intangible assets phenomena. There is, unfortunately, very little literature exists specifically about Bedouin domestic architecture particularly in the different Provinces of Jordan. The houses in Jordanian Badia are modelled on traditional Jordan Bedouin black tents. Nowadays traditional and modern housing are



Fig. 1: The Tent from the back in Umm eljammal (Photo. M. Hazza').



Fig. 2: Tent in Umm eljammal “protected” maharam and the “open” maq’ad.

considered to be different, but both reflect the deeply rooted basic values in the Bedouin culture and their cultural heritage. All buildings in the Bedouin area of Jordan contain symbolic architectural elements rooting in Bedouin culture; they used to be constructed according to local a socio-cultural setting, which provides a skeleton model for all managing design and construction processes that reflects the central reality of modern life conserving the full diversity of Bedouin cultural heritage. Nowadays, there are three types of dwellings; tent, traditional buildings made of natural building materials and modern

housing made up largely of man-made materials, all three types are familiarized with the Bedouin ecosystem, all in one implicit concept in multiple meanings.

Traditional housing is associated with not with simple, undeveloped building methods that construct in houses with a short life span but expresses itself at the multiple levels of holism arranged in both intangible and tangible arguments in Bedouin Taxonomy and social structure. It is also associated with the cultural patrimony and way of life inherited with few or no modern amenities. Modern houses, on the other hand, are built

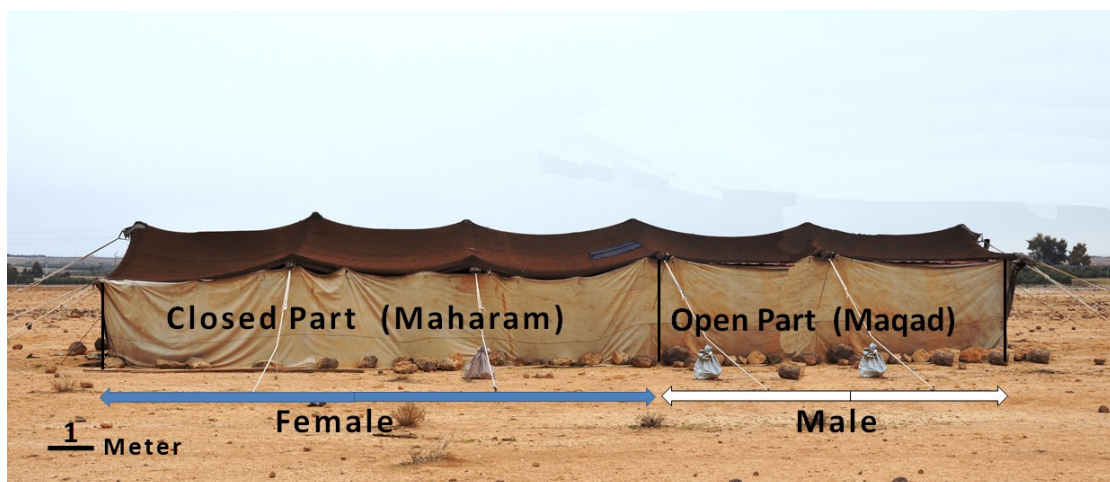


Fig. 3: The Tent from the front in Aljaffer in south of Jordan.

from relatively durable materials, have modern facilities such as piped water, sewage disposal and electricity, and are believed to reflect a modern urbanized life style.

The concept of the Bedouin traditional tent is quite for external very complex, its intangible properties nests the simplicity among the tribe member alongside one another without leaving the four values system in the Bedouin culture. The values which include “honor”, “decency”, “dignity” and “respect” are conceptualized in terms of various abstract notions that are associated with the Tent.

Intangible property in the Badia culture cannot meet or overlap with the tangible one, but generates it in a spatial and temporal correlation in Bedouin cultural system. The ecosystem is an association between intangible and tangible in both spacial and temporal domains. It is an association that specifies the values of one thing which are connected to a system in both cultural and natural heritage. The ecosystem is an interaction in all aspects of Bedouin culture. This entanglement generates the behavior that defines the role of each object in the cultural system. Now I try to connect the previous theoretical input to the tangible property in the Bedouin culture. Thus I get into my hand the word “*bait*” which refers to the space surrounding the tent or stone house. This domain is determined in the following manner. A strong man throws the stick used for grinding coffee out of the tent’s entrance, and measures the distance thus obtained as the radius of the circle surrounding the tent territory.

Internally the tent is divided into two separate parts. The tent dividers vary from region to region and tribe to tribe. They consist of cloth partitions, called *qati’* that is usually decorated. This main divider is extended outside the front of the tent and separates the female (*mahram*) from the male domain (*maq’ad*) or (*rubaa*) which means one fourth. The most extensively ornamented *qati’* faces the men's and guests'

sitting room, the *maq’ad*. The *qati’* is very large. It can be more than 8 meters long and two or three meters high. The *qati’* is placed across the narrow width of the tent's interior to give the women privacy (*sutra*) as they work and visit inside or outdoors. If they wish, the family may swing over the outer portion of the tent’s main divider at a right angle to cover the front opening as a protection against rain, wind or sandstorms (al-Sekhaneh, 2005; Manor-Binyamini, 2011; Marx, 1987). The size of the tent depends on the importance of the family, but is at least seven and a half meters long. It is supported by two tent poles connected by the main divider. An important personage, such as a tribal *sheikh*, will have a more imposing dwelling, made of about six broad strips (*shqaq*), each about twenty meters long, supported by four tent poles. When the strips of cloth are sewn together, they account for one long rectangle. This is then raised and supported by tent poles, known as *umdan albeit*. There are three types of *umdan albeit* the front poles called *almoqaddam*, the mid is called *alwaset* and the back is called *aldafea*. In the male part there are also two types of poles. The one in the front of tent is *amami* and the other one in the back is *alkaser* which are connected with tent ropes, *atnab* being used to keep the sides taut. For the Jordanian tribes the left part of the tent is *mahram* which is reserved for the family members and visiting women. It is occupied by the women of the house and no men but the husband and the spouse or closest relatives gain access to it. “The tent is woven by the women and the tribe is knitted by the men”. It constitutes a shielded space that offers protection to those who stay within it. Hence, one of the worst crimes in the Bedouin society of Jordan is to “blacken a man’s face” (*sawwada wajhaho*) by breaking “the law of the tent” (*haqq el-bait*), i.e, by injuring a person who is shielded by its protection (al-Sekhaneh, 2005).



Fig. 5: The development of the nowadays tent in Aljaffer.



ig. 4: In Auda Abu Tayeh (friend of Lawrence of Arabia) palace.

The concept of Bedouin traditional housing is instead quite complex; it is not within our objective to give a definition that can be generally used. In fact, the study shows that a clear distinction between traditional and modern housing in Bedouin area is only possible if considered the *maharam* and *maq'ad* system, especially if the building techniques are discussed, the authenticity of the bedouin household aspects means an entanglement among intangible and tangible

phases. However, for a proper understanding of this study, the concept and the background of Bedouin housing has to be explained. The palace of Auda needs a collaboration of culture and nature side by side to establish a management conservation plan to preserve it.

The concept of Bedouin housing has traditional then technical, as well as economic, significance. Bedouin housing is an integrated part of the traditional society based on self-subsistence through farming and herding. Bedouin housing provides the needed buildings and structures for different actions linked to farming and herding and the social life within a Bedouin culture. To conclude the four concepts, honour, dignity, decency and respect still govern and rule the mentality of the bedouins and this is reflected clearly in their own modern houses using the tent as a model.

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Summaries of the

Master Theses Defended at the

Faculty of Archaeology and
Anthropology

2015/2016

DETERMINATION OF THE ORIGIN AND CONSERVATION OF AN UNPROVENANCED METAL ARTIFACT FROM THE COLLECTION OF THE MUSEUM OF JORDANIAN HERITAGE

Sanaa Azaizeh

Supervisor: Prof. Dr. Ziad Al-Saad

This research is aimed to determine the origin of raw materials, manufacturing technology and approximate date of an unprovenanced copper based cauldron from the Museum of Jordanian Heritage collections, Yarmouk University. Moreover, the corrosion products and deterioration that grown on the artifact was investigated to develop or establish the conservation and treatment methods.

Multi-methodic approach was used: inductively coupled plasma- optical emission spectroscopy (ICP-OES) was used for bulk chemical composition, reflected microscopy was used for metallographic analysis to determine manufacturing techniques and corrosion products. X-ray

diffraction (XRD) was used to identify the mineralogical composition of the corrosion products. This was accompanied with the stylistic analysis which was performed via visual inspection and compared it with parallel examples to determine the function and approximate date of the artifact.

Based on the results of chemical and stylistic analyses the cauldron is of leaded copper type and was used to boil sugar, which likely dated to Ayyubid/ Mamluk period. The metallographic examination results showed that the artifact was worked and annealed after casting. Trace elements composition of the cauldron matches that of the copper ore from Sinai (Egypt); thus, Sinai could be the source of ore that used for manufacture this artifact.

XRD results showed that oxides, carbonate and chloride are the main corrosion products. Conservation of this artifact was accomplished by a combination of mechanical and local chemical cleaning to remove the external encrustation. Then artifact was brushed by Benzotriazole solution and coated with Paraloid B-72. Finally the cauldron is exhibited in the Museum of Jordanian Heritage.

FAVISM IS AN INHERITED DISEASE A MEDICAL ANTHROPOLOGICAL FIELD STUDY IN NORTH REGION OF JORDAN

Noboog Mubark

Supervisor: Dr. Ahmad Abu Dalou
Co-Supervisor: Prof. Dr. Mohammad
Al-Shunnaq

Favism or Glucose -6- Phosphate Dehydrogenase Deficiency is an X-linked hemolytic disorder in response to consumption of fava beans. Recent biostatistics conducted by Jordanian Ministry of Health show a significant increase in the number of cases of those who complain from favism in Jordan which have

a crucial negative impact on Jordanian population health and well-being.

This study aims at exploring this health problem in North District of Jordan, and to understand the link between it and consanguineous type of marriage. Necessary information for this research were gathered from Princess Rahmah Hospital for children in Irbid, and from the field where some of those who complain from favism were interviewed. Findings of this research will be submitted to Ministry of Health, in order to help health policy makers to develop strategies to control the occurrence of this disease, and recommend to cabinet of Ministers and Jordanian Parliament to legitimize laws that will lead to decline the rate of favism occurrence.

NEWS OF THE FACULTY

WORKSHOPS ON THE LEGAL ASPECTS OF THE PROPOSED AMENDMENTS TO THE JORDANIAN LAW OF ANTIQUITIES

The Faculty of Archaeology and Anthropology in cooperation with Almasir International Center for Studies and Research organized a series of workshops on "*The Legal Aspects of the Proposed Amendments to the Jordanian Law of Antiquities*", presented by the Department of Antiquities. The workshops were organized as a part of the project "*Rescue the Cultural Heritage of Jordan against Trafficking and Smuggling Antiquities*". The project, under the direction of Prof. Dr. Ziad al-Saad, is funded by the US Agency for International Development (USAID).

The participants at the workshops discussed and revised the existing legislations, where they recommended a series of corrections to the current law and the proposed amendments to be presented to the Ministry

of Tourism and Antiquities. The participants stressed on the need to conduct a series of modifications to the Jordanian Law of Antiquities No. 21 of the 1988, in order to cope with the developments and changes that have occurred from the date the law was passed to the present day, which will enable the official bodies to find solutions to issues arising from the weakness of some of the provisions of the law.

Prof. Dr. Al-Saad stated that the General Department of Antiquities submitted a proposal to amend the current law taking into consideration modern legal and technological developments, international legislations, and preservation the cultural heritage for future generations.

YARMOUK UNIVERSITY RESUMES ITS SUMMER SEASON OF ARCHAEOLOGICAL EXCAVATIONS IN UMM QAIS

The Department of Archaeology resumed a summer season of archaeological excavations at Umm Qais "Gadara" during summer semester. The excavations aimed at training the students on field's techniques of exploration, documentation, reporting, and drawing. In addition, excavations will help to investigate the cultural heritage of the site.

The Department of Conservation and Management of Cultural Resources started a summer course in training the students how to conserve archaeological artifacts in the field based on their chemical and physical properties.

The Faculty of Archaeology and Anthropology holds its yearly summer training courses in order to provide the students with skills needed to explore, preserve and promote the cultural heritage of Jordan.

OPENING OF THE NABATAEAN HALL

Faculty of Archaeology and Anthropology held a ceremony to mark the opening of the Nabataean Hall under the patronage of His Excellency Prof. Dr. Rifaat Alfaouri, president of the university, and Prof. Dr. Alessandra Avanzini from Pisa University, Italy. The Nabataean Hall at the Museum of Jordanian Heritage comes as a part of *Medina* project funded by the European Union. The project aims at documenting, analyzing, presenting and promoting the Nabataean culture in Jordan through a number of inscriptions and artefacts.

OPENING OF THE SMART HALL

Faculty of Archaeology and Anthropology organized the opening ceremony of the Smart Hall supported by Al-Qusoor Academy at Irbid. President of the university Prof. Dr. Rifaat Alfaouri stated that this support reflects the real integration and partnership between public and private sectors, adding that such partnership would serve the education process at the Jordanian universities.

Academy's Director General Mr. Ibrahim Shawaheen valued the distinguished cooperation and partnership between the Academy and Yarmouk University. He said that such partnership would enhance the development by launching many initiatives and programs of training to qualify the students' skills according to market requirements and demands.

ILLUMINATION OF AIN GHAZAL GALLERY AT THE MUSEUM OF JORDANIAN HERITAGE

Under the patronage of Prof. Dr. Rifaat Alfaouri, president of Yarmouk University, the Faculty of Archaeology and

Anthropology organized an opening ceremony of the illumination of Ain Ghazal Gallery at the Museum of Jordanian Heritage.

The new illumination system using LED lighting will keep the lights off when no one is retrieving materials or installing motion sensors on the lights. Display and conservation in essence the system of lighting in the museum light is a very common cause of damage to the artifacts, particularly those of materials sensitive to light. Using LED diodes will secure longer life span of Ain Ghazal statues than other light source. In addition, this technique can supply light for a lower cost of energy.

The President Prof. Dr. Alfaouri expressed his profound appreciation and thanks to the work team members: Dr. Mohammad A. Akour and the student Abd Arahman al-Asmar from the Department of Computer Information System and Abd Arahim al-Jarrah, the student in the Department of Electronic Engineering.

ACHIEVEMENTS

YARMOUK UNIVERSITY ORGANIZED A CEREMONY IN THE HONOR OF PROF. DR. ZEIDAN KAFABI

Yarmouk University organized a ceremony in the honor of Prof. Dr. Zeidan Kafafi of the Department of Archaeology on the occasion of his achievement of His Majesty King Abdullah II Ibn Al Hussein Medal for Excellence of the Second Class.

Prof. Kafafi was awarded the medal in recognition of his excellence in documenting the archaeology and history of Jordan and promoting the knowledge of its archaeology and cultural heritage.

Prof. Dr. Rifaat Alfaouri, president of Yarmouk University, awarded Prof. Kafafi the University Shield in recognition of his scientific achievements. Prof. Alfaouri said

that the achievement is a pleasure for Yarmouk family especially that the honor came from His Majesty King Abdullah II, and hoped to Prof. Kafafi further progress and success.

The president appreciated the outstanding achievements made by Prof. Kafafi, where he has a distinct presence in various international, regional and local forums in the field of archeology. He praised Kafafi's efforts made for the sake of boosting and maintain Yarmouk University in prestigious scientific reputation.

From his part, Prof. Kafafi pointed out that this occasion indicates the interest of the Hashemite leadership in science and scientists. He acknowledged Yarmouk University support to his research for about 35 years and expressed his gratitude for Yarmouk's honor.

HANI HAYAJNEH AS AN AMBASSADOR SCIENTIST OF THE ALEXANDER VON HUMBOLDT FOUNDATION

Prof. Dr. Hani Hayajneh was elected as the Ambassador of the Alexander von Humboldt Foundation in Jordan, which acts to promote cooperation between excellent scientists and scholars from abroad and from Germany. Prof. Hayajneh has represented Jordan on cultural heritage issues in several international venues, notably the Intergovernmental Committee of the UNESCO Convention for Safeguarding Intangible Cultural Heritage, and he is one of the accredited UNESCO international team of Facilitators for this convention.

EDWARD SAID AWARD IN ORIENTALIST DISCOURSE

Afaf Zeyadeh, from the Faculty of Archaeology and Anthropology, won *Edward Said Award in Orientalist Discourse* given by Palestine International

Institute, for her research entitled "*Mapping Palestine and the Recantation of Criticism in Holy Land Discourse*". The research is part of her M.A. thesis in which she studied "*Mapping Palestine and the Politics of Archaeological Research since the 19th Century until the Middle of the 20th Century*".

The research reveals that the archaeological research in Palestine emerged during the second half of the 19th century as a policy of the European involvement in Ottoman affairs. In this context, mapping Palestine became an important task, especially for the British War Office. Claiming to map the *Holy Land* from Dan to Beersheba, the British Palestine Exploration Fund performed "the first accurate and most extensive map of Palestine". This map was used in the warfare during the First World War. The Biblical phrasing was the backbone of the colonization scheme using the discourse of the *Holy Land* to compile the modern map of Palestine with its boundaries and names of places.

NEWS OF THE FACULTY MEMBERS

- Prof. Dr. Salih Sari is retired as an emeritus from the Department of Archaeology.
- Prof. Dr. Zeidoun al-Muheisen spends a sabbatical leave for the academic year 2016/2017.
- Prof. Dr. Khaled Abu Ghaniemeh spends a sabbatical leave for the academic year 2016/2017.
- Dr. Mustafa al-Naddaf spends a sabbatical leave for the 2016/2017 academic year.
- Dr. Mahmoud al-Naamneh spent a sabbatical leave for the 2015/2016 academic year and will spend unpaid leave for the 2016/2017 academic year.

Dr. Lamia al-Khoury resumed her work at the Department of Archaeology after spending a sabbatical year 2012/2013 at the

University of Michigan, followed by an unpaid leave.

- Dr. Mohammad Al-Roussan was promoted to the rank of associate professor at the Department of Anthropology.

- Dr. Sahar al-Khasawneh was appointed as an assistant professor at the Department of Conservation and Management of Cultural Resources starting from the 2016/2017 academic year. Dr. al-Khasawneh earned her Doctorate from Free Berlin University, Germany. Her thesis is entitled "*Testing the New Applications of Luminescence Dating in Archaeology*".

- Dr. Ruba al-Akash was appointed as an assistant professor at the Department of Anthropology starting from the 2016/2017 academic year. Dr. Al-Akash earned her Doctorate in the field of Social Anthropology from Kent University, England.

- Prof. Dr. Mohammad al-Tarawneh resigned from the Department of Anthropology.

- Mr. Husein Sababha resigned from the Department of Conservation and Management of Cultural Resources. He earned a scholarship to continue his Doctorate in Applied Sciences in Archaeology on "*Analyzing the Ayyubid Pottery and its Raw Materials*", the University of Bonn, Germany.

- Mr. Wasif Hawari spends unpaid leave for six months.

- Prof. Dr. Lutfi Khalil, from the University of Jordan, spends a sabbatical leave at the Faculty of Archaeology and Anthropology for the academic year 2016/2017.

- Dr. Firas Alawneh, from the Hashemite University, spends a sabbatical leave at the Faculty of Archaeology and Anthropology for the academic year 2016/2017.

ACADEMIC APPOINTMENTS

- Dr. Khaled al Bashairah was assigned as Vice Dean for Academic Affairs.

- Dr. Mohammad Alroussan was assigned as Vice Dean for Administrative Affairs.

- Dr. Omar al-Ghul was appointed as Acting Head of the Department of Epigraphy.

- Dr. Atef al-Sheyyab was reappointed as Acting Head of the Department of Archaeology.

- Dr. Ali Khwaileh was reappointed as Acting Head of the Department of Anthropology.

- Dr. Ahmad Abu Baker was reappointed as Acting Head of the Department of Conservation and Management of Cultural Resources.

- Mr. Mohammad Jaradat was appointed as Curator of the Museum of Jordanian Heritage starting from the second semester of the 2015/2016 academic year.