

# Thirty years of the Department of Anthropology at Yarmouk University, Jordan (1984-2014)

## The overview of bioarchaeological research

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**Abstract:** *This paper discusses the history and current status of the field of bioarchaeology in Jordan, organizationally represented by the Department of Anthropology at Yarmouk University. The department was founded in 1984, and the first research on human remains was undertaken in 1991 when Mahmoud El-Najjar returned to Jordan. Today this department is still the only academic unit covering anthropology and bioarchaeology in the Arab world.*

**Key words:** physical anthropology; bioarchaeology; Jordan; Mahmoud El Najjar

## Introduction

This paper presents the current and historical status of bioarchaeology carried out by scholars at Yarmouk University, where studies on archaeological human remains began in the early 1990s. Prior to the 1990s, the uncovered skeletal remains from various archaeological sites were left in the hands of archaeologists who were not trained professionally to analyse these materials. Some skeletal remains were studied by foreign bioarchaeologists or were transferred outside Jordan to be available for further study. Because of that, only a few papers (e.g., Ortner 1979, 1981) were published about human remains from Jordanian archaeological sites.

During the past few decades, Jordan, as well as many countries in the Middle East, has witnessed a notable scientific revolution that is characterized by a significant increase in the number of institutions, universities, and research centers within the country. Of those considered to be among the newest fields in the Arab world is anthropology, and the first anthropology department in Jordan was established in 1984 as a part of the Institute of Archaeology and Anthropology at Yarmouk University. Between 1984 and 1991, only staff members of the Department of Anthropology were

cultural or social anthropologists. In 1991 Mahmoud El-Najjar was the first physical anthropologist to join the department directly after his return to Jordan from the USA.

### Mahmoud El-Najjar and his contributions

The presence of Mahmoud El-Najjar, the father of Jordanian physical anthropology, enriched the department, not only because of his teaching experience that resulted from his work in various American and Arabian Gulf universities including Case Western Reserve University, New Mexico State University, and Kuwait University, but because of his research skills and academic connections with many physical anthropologists from all over the world. In addition to his own research, El-Najjar supervised many MA theses in different areas of physical anthropology. The thesis of Issa J. Sarie (1995) was the earliest odontological study in Jordan and was supervised by El-Najjar.

El-Najjar's strong relationship with Jerome Rose from the Department of Anthropology at the University of Arkansas, Fayetteville was the reason behind signing the cooperative bioarchaeological research agreement between Yarmouk University and the University of Arkansas in the summer 1995. The joint research project was mainly funded by the King Fahd Center for Middle East Studies at the University of Arkansas. Students from both departments of anthropology excavated four archaeological sites (Sa'ad, Yasileh, Ya'amun, and Natfieh, see the **Appendix 1** for details and **Figure 1** for locations) under the supervision of both El-Najjar and Rose and joint bioarchaeological field schools at these sites lasted for twelve consecutive summer seasons. The cooperation between both institutions has led to many MA theses in physical anthropology at Yarmouk University (e.g., Awad 1998; Koufahi 2000) and at the University of Arkansas (e.g., Williams 2001). In addition, several graduate theses have been written on other archaeological materials recovered at the site (e.g., Cooper 2000; Shqiarat 1999)

### Expansion of the Department of Anthropology

Mahmoud El-Najjar was the only physical anthropologist in the Department of Anthropology at Yarmouk University between 1991 and 1996. Then Abdel Halim Al-Shiyab was hired as a zooarchaeologist, responsible for research on animal remains. Originally he joined El-Najjar in Wadi Faynan project.

During the expansion of the Department, several Jordanian archaeological sites were excavated by the Department of Antiquities of Jordan or by other institutions. The skeletal and dental remains recovered from these sites were studied by researchers at Yarmuk University. Amongst these sites are Queen Alia International Airport

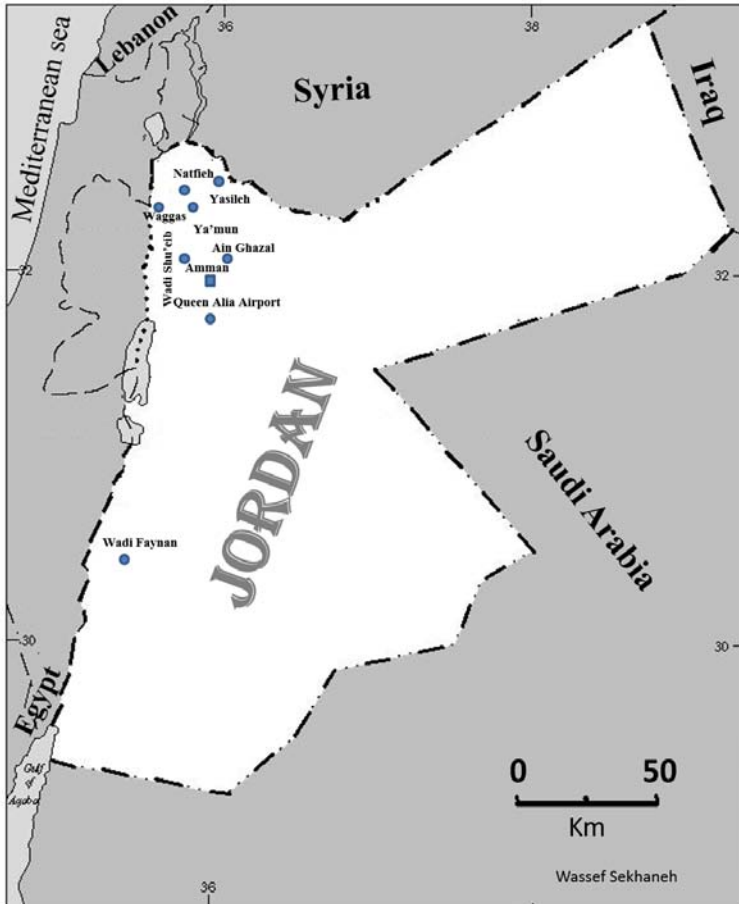


Figure 1. Archaeological sites with skeletons studied at Yarmouk University, Jordan

(Sa'oud 2003) and Waqqas (Sagheirin 2000). Ziad Kafafi, from the Department of Archaeology, collaborated with Rollefson and Simmons to unearth Ain Ghazal, one of the largest Neolithic sites in the Near East (Kafafi et al. 1990; Rollefson & Köhler-Rollefson 1992; Rollefson & Suleiman 1983; Simmons et al. 1988). Two graduate students in the anthropology program at Yarmouk University conducted their master theses on skeletal remains uncovered at Ain Ghazal. Yabroodi (2011) conserved and restored a skull (Yabroodi 2011) and Sarie (1995) examined through dental evidence the diet and subsistence economy at Ain Ghazal (Sarie 1995). Furthermore, in his dissertation at the Hebrew University of Jerusalem, Sarie (2010) discussed the palaeodiet and biocultural practices of the Neolithic people at Ain Ghazal.

In the years that followed some of the master graduates of the Institute of Archaeology and Anthropology at Yarmouk University became faculty members after earning PhDs in the United States and Europe. Abdulla Al-Shorman was the first graduate from the Department of Anthropology to join the department as a faculty member after earning his PhD from the University of Arkansas in 2002. He was followed in 2007 by Ahmad Abu Dalou who wrote his PhD thesis about biomechanical research on Native American skeletal remains. In 2010, Mohammad Alrousan and Ali Khwaileh joined the department. The full list of current staff members with some details is provided in **Appendix 2**. In addition to those trained in the subfield of physical anthropology, the department includes five staff members who hold PhDs in cultural anthropology from European or American universities.

The death of Mahmoud El Najjar in February of 2009 was a great loss to bioarchaeology in Jordan. El-Najjar, who was the founder and father of the physical anthropology program at the Yarmouk University, was not only a prominent scholar in bioarchaeology, but also a great person who inspired all of his students and colleagues. Four of the five faculty members of the Department of Anthropology at Yarmouk University were his students. A recent publication (Al-Shorman & Rose 2012) honoured his contribution to the field of paleopathology.

## **Appendix 1:** The catalogue of Jordanian archaeological sites with human remains studied at Yarmouk University

1. **Ain Ghazal:** one of the largest Neolithic sites of the Near East, located in the hills north of Amman. It was excavated by Gary Rollefson (Whiteman College), Alan H. Simmons (University of Nevada in Las Vegas), and Ziad Kafafi (Yarmouk University) between 1982–1999 and 2011–2012 (Rollefson & Suleiman 1983; Simmons et al. 1988; Kafafi et al. 1990). The site was dated to the Middle/Late Pre-Pottery Neolithic B (7250–6000 BCE) with a total of 48 individuals, Pre-Pottery Neolithic C (6000–5500 BCE) with 14 individuals, and the Yarmoukian period (5500–5000 BCE). Human remains were studied by Issa J. Sarie (1995, 2010) and Rasha Yabroodi (2011) as well as by Michelle Bonogofsky (2011).

2. **Natfieh:** an Early Roman period archaeological settlement and cemetery located in northern Jordan about 5km south-west of Irbid. The site was excavated by Mahmoud El-Najjar (Yarmouk University of Jordan) and Jerome C. Rose (University of Arkansas, Fayetteville) from 2006–2007. Skeletons of 36 individuals are curated in the Department of Anthropology at Yarmouk University. Reconstruction of diet based on stable isotope analysis was carried out by Bashairah et al. (2010).

3. **Queen Alia International Airport (QAIA):** a cemetery with 52 graves some 30km south of Amman, dated to the Roman period (Ibrahim 1987). The site was exca-

vated by the Jordanian Department of Antiquities for two seasons (1978 and 2000). Human remains from this site were studied by Noor Al-Deen Sa'oud (2003) and by Bassam Hussein (2013), a graduate student at the Department of Anthropology, who compared biomechanical properties of skeletal remains of Queen Alia International Airport (QAIA) with those from Wadi Faynan.

4. **Sa'ad**: this site dates to Late Roman/Byzantine period and is located 27km west of Mafraq. There was a church and a cemetery with various types of tombs, especially horizontal shaft tombs. The site was excavated by Mahmoud El-Najjar (Yarmouk University of Jordan) and Jerome C. Rose (University of Arkansas, Fayetteville) between 1995 and 1997. Skeletons of 133 individuals are curated in the Department of Anthropology at Yarmouk University. Fatimah Awad (1998) studied the teeth discovered at the site whereas Hisham Koufahi (2000) focused on the pathological conditions. Additionally, Kimberly Williams from the University of Arkansas conducted odontological research (Williams 2001).

5. **Wadi Faynan**: this site, dated to Late Roman/Early Byzantine period, is located at the foothill of the rift valley approximately 300km south of Amman. The site was excavated by Mahmoud El-Najjar and Abdel Halim Al-Shiyab (Yarmouk University and the British Institute in Amman) between 1995 and 1996 (El-Najjar & Shiyab 1995, 1998; Findlater et al. 1998). The cemetery included 55 human skeletons that were studied by Loutus Abu Karaki (2000), Bassam Hussein (2013), and Rula Asad (2000) who reconstructed activity patterns using biomechanical approach. Recently isotopic analysis was done by Perry et al. (2012).

6. **Wadi Shu'eib**: this Neolithic village is located approximately 22km west of Amman, c. 8km south of Salt (Simmons et al. 1989). The site was excavated by Alan Simmons (University of Nevada at Las Vegas) in 1988 and 1989. The remains of eight individuals were studied by Salah El-Din Abbasi and Issa Sarie (1997) who studied the prevalence of dental enamel hypoplasia.

7. **Waqqaq (Tell Elazia)**: this cemetery, dated to Roman/Byzantine Period, is located about 45km west of Irbid and 30km north of Pella. It was excavated by the Jordanian Department of Antiquities in 1999. The dentition of more than 164 individuals was studied by Mohammad Sagheirin (2000).

8. **Ya'amun**: this site is located 25km south of Irbid, and about 3km southwest of Nu'aimeh. The site, occupied from the Early Bronze until modern times, includes a settlement with church, wine presses, and a cemetery from which human remains were retrieved (Barnes 2003). The site was excavated by Mahmoud El-Najjar (Yarmouk University of Jordan) and Jerome C. Rose (University of Arkansas, Fayetteville) between 1999–2005 (El-Najjar 2011). In 2004, 38 skeletons were unearthed, and in 2005 another 30 skeletons were retrieved. The human remains are currently stored at

Yarmouk University. The teeth were studied by Catherine Alston (2003) and Morouj Hamzah (2011). Two articles were published by Abdullah Al-Shorman where the first focuses on soil phosphorous analysis from the site (2004a), and the second focuses on tooth enamel stable isotopes (2004b). A thorough bioarchaeological study was conducted by Ammar Ubaydat (2002) and Mohammad Alrousan (2005). In addition, a masters thesis was written by an American graduate student from the University of Arkansas (King 2001) as well as a PhD dissertation (Al-Shorman 2002) in which teeth from different northern Jordanian archaeological sites including Ya'amun were examined.

9. **Yasileh**: this Late Roman/Byzantine site is located 9km east of Irbid and 5km west of Al-Ramtha in northern Jordan. It was excavated by Zeidoun Muheisen (Department of Archaeology, Yarmouk University) in 1988. A hundred and forty-four individuals were recovered at the site. Apart from a general bioarchaeological study (Muheisen & El-Najjar 1994), Ali Kwaileh (1999) studied the teeth of the inhabitants, Nibal Khalil (2002) investigated pathological conditions, and Abdulla Al-Shorman attempted to reconstruct diet and social status (2004c) and analysed burial customs (2006).

## **Appendix 2:** Directory of current staff members in the Department of Anthropology at Yarmouk University

1. **Abdulla Al-Shorman**, Professor of Physical Anthropology; PhD: University of Arkansas, Fayetteville, USA, 2002; areas of interest: bone chemistry, palaeoclimate, and bioarchaeology; email: alshorman@yu.edu.jo.
2. **Abdel Halim Al Shiyab**, Associate Professor of Physical Anthropology; PhD: Claude Bernard University Lyon 1 of France, 1994; areas of interest: human osteology, palaeopathology, and palaeoenvironment; email: ahalim@yu.edu.jo.
3. **Ahmad Y. Abu Dalou**, Assistant Professor of Physical Anthropology; PhD: University of Missouri, Columbia, USA, 2007; areas of interest: bone biomechanics, bioarchaeology, palaeopathology, and medical anthropology; email: aya9af@yahoo.com or aabudalou@yu.edu.jo.
4. **Mohammad Alrousan**, Assistant Professor of Physical Anthropology; PhD: University of Barcelona, Spain, 2010; areas of interest: dental anthropology, dental microwear, bioarchaeology, and diet reconstruction; email: rousan78@yahoo.es or mrousan@yu.edu.jo.
5. **Ali M. Khwaleh**, Assistant Professor of Physical Anthropology; PhD: University of Arkansas, Fayetteville, USA, 2009; areas of interest: bioarchaeology, dental anthropology, skeletal biology, human evolution, and human variation; email: Khwileh@yu.edu.jo.

6. **Nasser Gharaibeh**, Lecturer of Physical Anthropology; MA: Yarmouk University, Jordan, 2002; areas of interest: zooarchaeology and bioarchaeology; email: Nggharaibeh@yu.edu.jo.

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