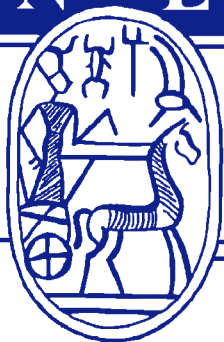


NEWSLETTER



INSTITUTE OF ARCHAEOLOGY HORN ARCHAEOLOGICAL MUSEUM

Table of Contents

	Page
<i>Mysteries of Tall Jalul</i>	1
<i>Tall Jalul 2004</i>	2
<i>Legacy of Jordan</i>	2
<i>Come Dig</i>	3
<i>Random Survey</i>	4

INSTITUTE OF ARCHAEOLOGY
HORN ARCHAEOLOGICAL
MUSEUM
NEWSLETTER

Paul J. Ray, Jr. Editor
David Merling Assoc. Editor
Randall W. Younker Assoc. Editor
Robert D. Bates Asst. Editor

The Newsletter is published four times a year by the Institute of Archaeology, Andrews University. Annual subscription price is \$7.50. Museum membership, subscription, and editorial correspondence should be addressed to the Horn Archaeological Museum, Institute of Archaeology, Andrews University, Berrien Springs, MI 49104-0990, Telephone 269-471-3273, Fax 269-471-3619, e-mail hornmusm@andrews.edu.

Volume 25.3
Summer 2004
ISSN 1095-2837

Mysteries of Tall Jalul

We do not yet know the ancient identity of this site. It is 5 km due east of Madaba, close to Hesban and Mount Nebo and was occupied from the Early Bronze Age to the Persian period. As the largest site in the region, it undoubtedly played an important role throughout ANE history; some have even suggested that it was biblical Heshbon in earlier periods. Perhaps an inscription may one day be found that will shed light on the identity of this ancient city.

Finds during previous seasons included a large Persian building, the approach roads, and the gateways to the city during Iron Age II (9th to 6th centuries B.C.). From this same period, we found a large building divided into three long rooms, known as a tripartite building, which undoubtedly played an important economic and administrative role in the city.

More recently we have excavated a mysterious cave located beneath a 7th-century B.C. house that contained more than a dozen skeletons of men, women, and children. Could these bones represent ancient Ammonites who were killed during an attack on their town? Small finds from this house included ceramic figures of horse and riders and seals with Ammonite names. Elsewhere on the site we found small figurines of other animals, including a lion.

Jalul must have been on or near the southern border of the Ammonite kingdom. The pots, figurines, and inscriptions were virtually identical to those of other Ammonite sites to the north, including Hesban, 'Umayri, and even Amman, the capital of the Ammonites. But just a few miles

(cont'd on p. 2)



Jalul Team of 2004.

to the south, archaeological sites contained objects and inscriptions that seem to be distinctively Moabite. Hence, Jalul was an important frontier city for Ammon for at least during part of its history.

Last summer Drs. Art Chadwick and Larry Turner of Southwestern Adventist University joined forces with the Jalul team to remap the site, using Global Positioning System (*GPS*) technology (see the accompanying article). Come with us this summer (2005) and discover more of the secrets that Jalul has to offer. (Randall Younker)



Tall Jalul 2004

The goal of the 2004 season (May 10-22) at Tall Jalul was to test a new Global Positioning System (*GPS*) known as “*Z-Max*.” The *Z-Max* surveying system is produced by Thales Navigation and is a precision *GPS* system originally designed for topographic and construction survey. It is superior to other *GPS* systems because of Automatic Decorrelation and Parameter Tuning for Real Time Kinematic positioning (*ADAPT-RTK*).

This new system which has the capability of locating three dimensional points (latitude, longitude, and elevation) on the surface of the planet within an accuracy of centimeters, and even millimeters, had previously been shown to be extremely accurate and reliable in plotting the specific location of individual bones of dinosaurs in a paleontological excavation conducted in the US in northeastern Wyoming by Drs. Art Chadwick and Larry Turner of Southwest Adventist University (Keene, TX). One of the characteristics of this new system that make it so attractive for field work is that it is extremely fast. A given locational point can be immediately recorded literally by the click of a button.

Drs. Chadwick and Turner were able to record thousands of points to create a very accurate, new topographical map of Jalul at one-meter intervals in just two

days. These data points can be read on a small screen that is attached to the receiver and are immediately recorded by the unit’s computer.

When the locational data are downloaded into a computer software (*ARCGIS*), the points can be combined with digital photos of various features (bones, rocks, et...) to create three-dimensional images of those features. The software has the capability to compensate for any distortion created by the digital image and maintain the precise spatial relationships of the features. Thus, for example, when several points (length, width, depth) for each of several architectural elements are combined with a digital image, it is possible to create a three-dimensional model in precise spatial relationship to each element. The software can then be manipulated to provide a view from any desired angle.

The application of this new technology to archaeology is immediately obvious. With *Z-Max* and *ARCGIS*, any locus point on an archaeological site can be quickly and accurately plotted, including the parameters of features (such as walls or streets), as well as the precise location of a given artifact.

In preparation for the re-plotting and mapping of Jalul, about a dozen students and teachers, mostly from Andrews University, along with four local workers, cleaned the debris from all the previously excavated fields that had accumulated since the last excavation seasons in 1999 and 2000. During the cleaning process they also removed a dangerously eroded balk in Field B. The removal of the balk exposed a few additional pavement stones from the 8th-century B.C. pavement that had been discovered in previous seasons. These new stones were photographed and mapped with the new *Z-Max* system.

Meanwhile, Chadwick and Turner were able to re-plot and map all the architectural features in Fields A, B, C, D and E. From these points they were able to create successfully a 3-D view of these architectural features. The data points, accurate to within a few millimeters, were combined with digital photographs taken



Dr. Art Chadwick taking points.

from a helicopter, and the computer software created a 3-D map of the entire ancient city that can be rotated and viewed from any angle on a computer. It is possible to “zoom in” and see individual features such as streets, walls, and even small objects in 3-D color!

Chadwick and Turner were also able to make a new and more accurate topographical map of Jalul recording several thousand precise location data points. The results were very successful. The Madaba Plains Project (*MPP*) is among the first to apply this mapping technology to a site in Jordan, placing *MPP* scholars once again on the cutting edge of archaeological research. (Randall W. Younker and David Merling)



Legacy of Jordan

With the 2005 excavation season Andrews University celebrates its 37th year of cooperation with the government of the Hashemite Kingdom of Jordan. When we say “government” we really mean King Abdullah II bin Al Hussein and his many subjects, who work with us, as colleagues, to further our understanding of the early history of Jordan.



King Hussein.

The roots of the kingdom go back to before the birth of the Prophet Muhammad (Peace Be Upon Him). Hashe, the Prophet's grandfather, was instrumental in forging relationships with the many Arab tribes. In addition, due to his far ranging trading trips, known as *Eilaf*, Hashe's fame for hospitality and leadership spread to the entire Saudi Arabian peninsula and as far as Egypt, Syria, and Palestine. Eventually the Hashemites led the "Arab nation," seeing

everyone connected to the Prophet as part of one community. Their duties included service to the holy sites in Mecca and Madina.

It was in this leadership role that Al Sharif Hussein Bin Ali together with Prince Faisal Bin al Hussein led out in the Damascus Convention of 1915, which led to the rebellion against 400 years of foreign rule. In due course, Prince Abdullah Bin al Hussein was able to establish the independent state of Jordan.

After a distinguished military career, which included training and service for Jordan in the United States, Britain, Germany, and of course Jordan, His Majesty King Abdullah II assumed his constitutional powers as Monarch of the Hashemite Kingdom of Jordan on February 7, 1999. This is a date that none will forget, since not only was it a day celebrating King Abdullah's ascension, but it was also the day his much beloved father King Hussein passed away. Like an oasis in the desert, King Hussein and, thus, Jordan, have stood for moderation in a region of parched narrow-mindedness. He will be missed.

On the other hand, in the few years of his reign, King Abdullah II has begun to make his own mark. Since the beginning of his reign, Jordan has been admitted to the World Trade Organization and



King Abdullah.

King Abdullah II has been working to advance the civil liberties for all citizens, including women. His love and work for his homeland, have continued the legacy of Jordan, as one of the most progressive (friendly and beautiful) countries in the Middle East. For those of us who have regularly participated in our many projects, Jordan is our second home. We love the people, the climate, and government.

(David Merling)



MADABA PLAINS PROJECT TALL JALUL, JORDAN May 5 - June 17, 2005

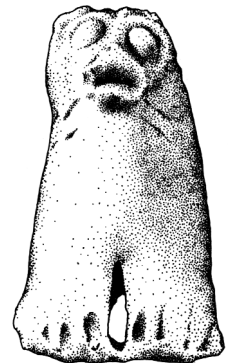
Experience another culture

Travel on weekends to major sites in Jordan

<http://www.andrews.edu/archaeology/Jalul.Application.2005.pdf>

Apply online, download forms, and send to:

Tall Jalul Excavations
Andrews University
Berrien Springs, MI 49104-0990
269-471-3273 / Fax: 269-471-3619
email: hornmusm@andrews.edu



RANDOM SURVEY

Ancient Sinai Desert Fortress Found

Canadian archaeologists have recently uncovered the remains of a fortress in the Sinai Desert near the coast of the Red Sea that dates to the last years of the Old Kingdom (ca. 2700-2200 B.C.). The fort is circular in shape and was built with limestone blocks instead of the usual mud brick. The excavators maintain that the fort was occupied for nearly a year and seems to have been active in Egypt's Sinai wars against the Bedwin (ancient ancestors of the modern Bedouin).

Mycenaean Grave Discovered

An unplundered Mycenaean grave was recently discovered ca. 47 km SE of Sparta, dating between 1340-1050 B.C. The chamber tomb included the skeletons of nine adults and one child, with grave goods made of clay, bronze, and semi-precious stones.

*To discover more about archaeology, the
Institute, and the Museum, contact us at:*

VOX: 269-471-3273

FAX: 269-471-3619

E-mail: hornmusem@andrews.edu

or visit our Web site at:

www.andrews.edu/archaeology

Dead Sea Coin Hoard

A hoard of coins has recently been discovered along the shore of the Dead Sea. These small copper coins were minted in the Hasmonean period during the reign of Alexander Jannaeus (104-76 B.C.). All the coins portray a ship's anchor with the Greek inscription, "King Alexander." The other side of the coins depict a crown surrounding an 8-pointed star and the Hebrew inscription, "Yehonatan the King."

Date of Ketef Hinnom Amulets Affirmed

Updated photographic and computer imaging techniques have affirmed a 7th-century B.C. dating for the "Priestly Benediction" from Num 6:24-26 inscribed on silver scrolls discovered in a tomb outside Jerusalem. While some have insisted that the amulets date to the Hellenistic period, renewed examination of the script confirms that at least that portion of the text did indeed exist in the pre-exilic period.

Jerusalem Model to Move

The large model of Jerusalem which has been located at the "Holy Land Hotel" for almost 40 years will be moved to the Israel Museum to make way for construction of new apartments.

NEWSLETTER



INSTITUTE OF ARCHAEOLOGY

HORN ARCHAEOLOGICAL MUSEUM

Andrews University, Berrien Springs, MI 49104-0990
Address Service Requested

Non-profit Organization

U.S. Postage
PAID
Permit No. 5
Berrien Springs, MI 49103