

RENOVATION OF AL KARAK ARCHAEOLOGICAL MUSEUM AS CORE OF HERITAGE TOURISM AND AWARENESS WITH TRIAL INTRODUCTION OF MULTILINGUAL INTERPRETATION BY TWO-DIMENSIONAL CODE “QR CODE” IN EXHIBITION

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Introduction

On 23rd of March 2019, newly renovated Al Karak Archaeological Museum (KAM) was opened¹. The renovation and relocation of KAM has been implemented by the Department of Antiquities (DoA) and Japan International Cooperation Agency (JICA) with the cooperation of the Ministry of Tourism and Antiquities (MOTA)².

1. The opening (re-opening) ceremony of KAM was held in the presence of the H.E. Mr. Yazid OlAyan (Acting Director General of DoA) on behalf of H.E. Ms. Majd Shweikeh (Minister of Tourism and Antiquities), H.E. Mr. Hidenao Yanagi (Ambassador of Japan to Jordan), Mr. Mahmoud Soub (Director of MOTA Al Karak Directorate) and Mr. Tsutomu Kobayashi (Chief Representative of JICA Jordan Office). Title of each attendee mentioned here is his or her title at the ceremony.
2. Renovation work of the museum building was implemented by supervision of Eng. Asma Shahaltog (DoA). Renovation work of exhibition was implemented by the preparation team led by the authors with help and project coordination by Ms. Mais Ghawi (Program coordinator of JICA heritage tourism project in MOTA). The work was cooperated by Mr. Khaled Tarawneh (Director of DoA Al Karak) and Mr. Hamza Jarajrah. Exhibition contents, in particular graphic panels, were reviewed/edited by the DoA HQ team led by Ms. Samia Khouri (DoA Museum and Awareness Directorate), Ms. Hanadi al Taher (DoA Research and Publication Directorate) and cooperated by Ms. Fadia al-Adwan. Production work of Al Karak tourism map was implemented by the authors (Oyama and Massadeh) and Mr. Mahmoud Soub (Director of MOTA Al Karak Directorate) with help by Ms. Huda Abu Nowwar (Program coordinator of JICA heritage tourism project in MOTA). Title of each person mentioned above is his or her title during the preparation stage of the museum until 2019. Currently in 2023 Mr. Hamza Jarajrah (Curator of KAM) is in charge of operation and activity of the museum with cooperation of DoA Museum Directorate headed by Mr. Basem Mahameed.

New location of renovated KAM is the part of the historic Ottoman building complex (*Saray*) facing to the north fosse of Al Karak Castle (**Fig. 1**)³. Before the renovation, KAM was located in the vaulted gallery in the Middle Islamic lower bailey of Al Karak Castle⁴. The former KAM was the work renovated under the Tourism Sector Development Project (TSDP) which had been implemented by MOTA and JICA (JICA 2000; Oyama 2016)⁵. Since 1999, through several projects, such as TSDP and “Technical Cooperation Project for Tourism Development through Museum Activities”, as well as dispatching experts and volunteers, JICA has cooperated construction, exhibition planning, education and museum management of several museums in addition to KAM, *i.e.* the Jordan Museum in ‘Ammān, Historic Old Salt Museum and Salt Ecomuseum in Old historic city of As Salt, the Dead Sea Museum near Hammamāt Mā‘īn and the Petra Museum. The former KAM was opened in 2004 and had been operated by DoA. Due to the detection of cracks in the lower bailey of the Al Karak Castle, where KAM was located, the decision was made to temporarily close and relocate KAM for safety reasons.

3. Outline of newly renovated KAM were reported so far also by the curator of KAM (Al-Jarajrah 2023) and author (Mubaideen 2018).

4. Authors (Massadeh and Oyama) have worked also for preparation and operation management of former KAM.

5. Opinions, comments and viewpoint mentioned in this paper is based on author’s point of view, not official statement by JICA.



1. Newly renovated Al Karak Archaeological Museum. (Photo by the author "Oyama").

Al Karak Archaeological Museum as Core of Heritage Tourism in Al Karak

The area covered by the exhibition of KAM is the archaeology and history of the Al Karak region (area of Al Karak Governorate), especially focusing on Al Karak plateau and the archaeological sites along the King's Highway, as well as the archaeology and history of Al Karak castle and fortified town of Al Karak, especially focusing on Medieval Al Karak castle and town. KAM play a role as regional museum of Al Karak region as well as museum of Al Karak town and site museum of Al Karak castle. Before KAM had first renovated by JICA project and opened in 2004, KAM existed

in the same vaulted room inside the castle⁶ but the exhibition consisted of merely display of archaeological artifacts from the area around Al Karak including Tafileh. The presentation of history of Al Karak town and Al Karak castle was not included in the old KAM before the renovation project by JICA since 2000 (Oyama 2016:252-254).

In the context of heritage tourism in Al Karak region, KAM is expected to be core of network connecting cultural heritage of three areas; 1) Al Karak Castle 2) Historical Al Karak town 3) Al Karak region, in particular sites along the King's Highway on Al Karak Plateau. This role of KAM as core of heritage tourism is similar concept as core of ecomuseum (Oyama 2019a: 427). Raising awareness by local Al Karak community toward their own cultural heritage

is important mission of KAM as well. KAM as core of regional heritage can play such social role through exhibition and education activities. It should be noted that folklore, living heritage and modern history of Al Karak area is not covered by the exhibition of KAM considering the plan of new folklore museum in Al Karak.

The King's Highway and Al Karak Archaeological Museum

The King's Highway passing through the town of Al Karak and the Al Karak region is one of major themes addressed by KAM. The King's Highway in Al Karak region was part of *Via Nova Traiana* in Roman period and part of the pilgrimage route to Mecca (*Darb Al Hajj*) in the Islamic periods. The role of the King's Highway played for the geopolitics of Al Karak region has been significant. With archaeological sites along this route, as well as continuous use of the route in history, the King's Highway itself is an important "historical route as cultural heritage", as proposed by UNESCO (UNESCO 1994). One of the missions for KAM is to promote awareness toward the King's Highway as cultural heritage.

The plan of "King's Highway Heritage Route" connecting main heritage sites and museums from 'Ammān (Jordan Museum) to Al 'Aqabah along the King's Highway, starting from the Jordan Museum, has been proposed by the author (Oyama) and MOTA (Oyama 2019a). In this plan, local museums along the

6. Plan of establishment of KAM dates back to the 1960's (Ajaj 2009:44-45).

King's Highway⁷ are expected to be the core of heritage tourism as well as promotion of local community awareness in each region. Through the introduction of the King's Highway and main archaeological sites along this historical route in Al Karak plateau by exhibition, KAM is expected to be one of core museums along the King's Highway Heritage Route.

Each of the exhibition section of KAM deals with “the Kings Highway” in different period of local history as follows;

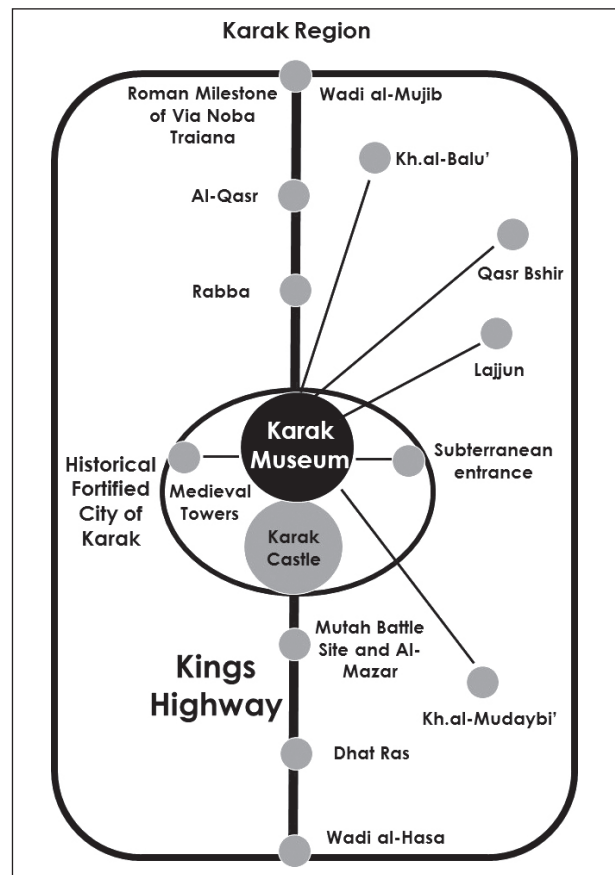
- 1) Introduction: Outline of the King's Highway.
- 2) Iron Age Moab exhibition: the King's Highway with relation to the Moabite Kingdom.
- 3) Roman Exhibition: *Via Nova Traiana* along the King's Highway.
- 4) Medieval Al Karak exhibition: *Darb Al Hajj* through the King's Highway.

Scheme of this network among KAM as core and several heritage sites in Al Karak, in particular area along the King's highway, can be shown as **Fig. 2** (Oyama 2019a: 427).

New Building Facilities of Al Karak Archaeological Museum

Renovated KAM exhibition is located in the western building of the “*Saraya*” complex. This *Saraya* complex is the group of the stone-built Ottoman historical buildings, originally used for administration by the Ottoman, that had been renovated⁸ and utilized as tourism facilities before it was converted to the museum. Renovation work of the basic parts of the museum building facility, including walls and electricity, had been implemented by the Department of Antiquities since 2016. Exhibition work has been implemented under the cooperation of JICA.

The exhibition space of the former Al Karak Museum consisted of two rooms that were renovated from a long medieval vaulted room. The first room dealt with exhibition section of “Introduction” and “Local History of Al Karak Region”, and the second with that of “Medieval History of Al Karak Castle and



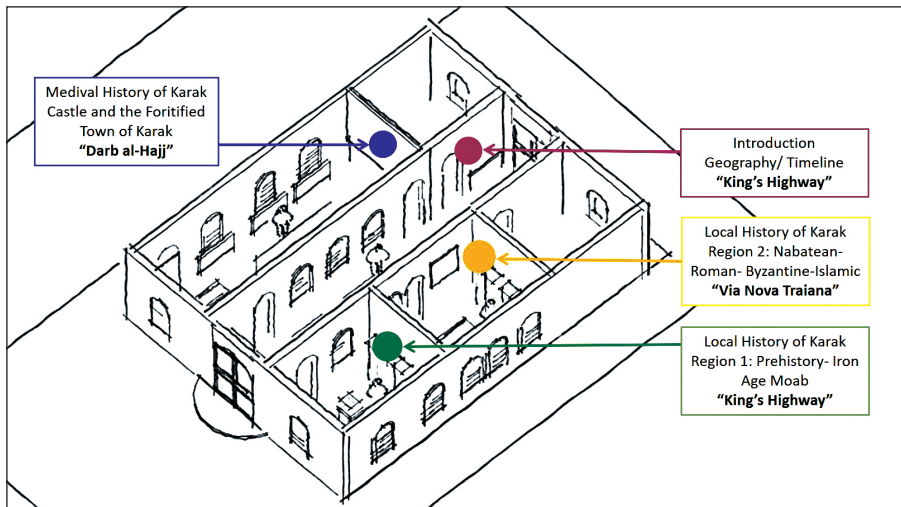
2. Schematic plan of Al Karak Archaeological Museum and local heritage network (Oyama 2019).

the City of Al Karak” and “Bab Adh DHira’ Tomb Exhibition” (Oyama 2016: 253-254). The exhibition space in the new KAM, which was renovated from historical Ottoman building (*Saraya*), consists of the central hall area with the entrance and exit, two rooms in the right wing, and one room in the left wing, for a total of four rooms (**Fig. 3**). Each room is smaller than the exhibition rooms in the former KAM. Therefore, the contents of the exhibition were reconfigured, taking into consideration the reduced area of the exhibition space and the layout of the new exhibition rooms. The showcases of the former KAM were fixed in the exhibition room and were difficult to relocate, so the showcases were re-produced again. Graphic panels were also re-planned, edited, and newly produced based on the contents of the former KAM⁹. AV monitor screen

7. Mādabā Regional Museum (under planning), Al Karak Archaeological Museum, At Tafilah Museum (under planning), Petra Museum and Al ‘Aqabah Museum.

8. Renovation of historical building complex of Ottoman *Saraya* in Al Karak was implemented by the World Bank project.

9. Text used in graphic panels of former KAM were based on original text written by Dr. Zeidan Kafafi, Dr. Fawzi Zayadine and Dr. Ghazi Bisheh, The text used for the graphic panels of renovated KAM were also partially based on the original texts written by them.



3. Overview drawing of Al Karak Archaeological Museum exhibition rooms. (Drawing by the author (Mubaideen)).

were newly installed in the renovated KAM.

Accessibility Survey of New KAM Building Facilities

During the renovation stage of KAM building in 2016, a field survey of museum facilities from accessibility/barrier-free perspective was conducted by the team of JICA expert in the field of disability and accessibility specialists in Higher Council for Affairs of Persons with Disabilities (HCD)¹⁰. Accessibility in the museum for wheel-chair user were checked on site. Advice and recommendation for barrier-free based on the survey was given to KAM team by disability specialist team. It was considered and reflected in the renovation work of the museum facilities, such as accessible space size in exhibition floor and entrance in lavatory.

Exhibition of Renovated Al Karak Archaeological Museum

Renovated permanent exhibition consists of the following three sections (Fig. 4)

- 1) Introduction
- 2) Local History of Al Karak Region (two sub-parts included)
- 3) Medieval History of Al Karak Castle and the Fortified Town of Al Karak

The contents of each exhibition are as follows;

Karak Archaeological Museum Exhibition Zoning (with key theme of "historical route" in each zone)



4. Exhibition zoning of Al Karak Archaeological Museum with key theme of historical route in each zone.

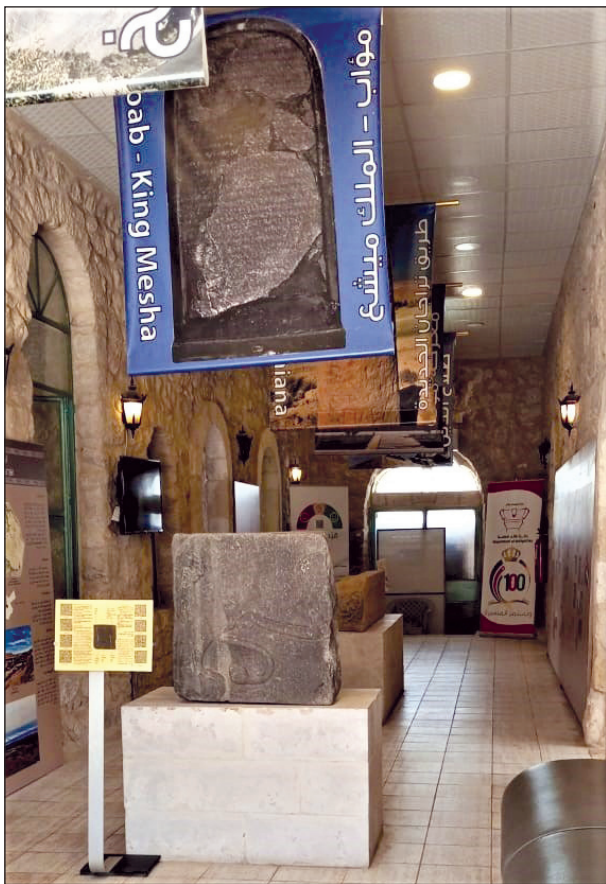
Introduction (Fig. 5)

Central space of the building is allocated to the exhibition room for the Introduction. Banners from the ceiling indicate the key words in the permanent exhibition of KAM dealing with local history of Al Karak, such as "Moab" "Via Nova Traiana" "Battle of Muthah" and "Salah al-Din". Two representative artifacts from Al Karak area are exhibited in the introduction hall. The first artifact is the basalt slab with part of lion relief from Iron age Moab, called "The Al Karak Lion" (Weber 2017:

87)¹¹. This basalt slab, which was reused as part of the wall in a heritage building near Al Karak castle, was originally part of the gateway of monumental architecture in the

10. Ms.Yahoko Asai, JICA Expert/Advisor for Disability Affairs, Eng.Rula Jaradat and Ms. Mayson Hamarshah, accessibility specialists in the Higher Council for Affairs of Persons with Disabilities (HCD).

11. "The Al Karak Lion" is one of two Iron age basalt slabs existing in Al Karak.



5. Exhibition of central hall (Photo by Hamza Jarajrah).

Moabite Kingdom in Al Karak area (Weber 2017). This artifact is displayed as one of the representative objects telling the importance of Al Karak in the Iron Age Moab. The second artifact is the limestone lintel with Mamluke inscription showing the title of “Al-Marik al-Mansur”¹², which was excavated in Al Karak castle. This artifacts is displayed as one of the representative objects telling Medieval Al Karak castle and town. The following themes are presented in the introduction gallery.

Timeline

Historical time line focusing on the local history in the Al Karak region, from Paleolithic to modern era, is displayed as large panels in the corridor. It shows main historical events of Al Karak local history, photo of main archaeological sites and archaeological finds from Al Karak region in chronological order in the timeline.

12. In KAM it is thought to be possibly attributed to Mamluke Sultan Qalawun (reigned 1279-1290), however further study is required.

Land of Al Karak

Topographical and geographical feature of Al Karak region, in particular Al Karak plateau and several landscape of Al Karak region, including SHihān Mountain (Jabal SHihān), Wādī Al Mūjib as northern border of Al Karak governorate, Wādī Al Ḥasā as southern border of Al Karak governorate, and Wādī Al Karak going down to the south of the Dead Sea, are introduced in panel and slide show by AV screen.

Al Karak and the King’s Highway

General outline history of the King’s Highway shown above is introduced, with indicating main heritage sites, in addition to Al Karak Castle and town, along the King’s Highway such as Ar Rabbah, DHāt Rās *etc.*

Local History of Al Karak Region

Facing the east side of the central gallery hall are two small exhibition rooms. These two exhibition rooms deal with the local history of Al Karak region until the early Islamic period.

Local History of Al Karak Region: First Section

The first exhibition room, located in the southeast corner of the museum building, deals with the prehistory of the Al Karak region up to the Iron Age, with a focus on themes related to the Iron Age Moab, considering that Al Karak region is part of the area called Moab in history (Miller 1991: 1).

This room contains small exhibition of Al Karak prehistory before the Iron age, from palaeolithic to the Bronze age. Handax from Wādī ‘Assāl, Flint tools from Wādī Al Ḥasā, and the Early Bronze age pottery from Bāb Adh DHirā’ are on display. Several Neolithic and Bronze Age archaeological sites and monuments, including Adh DHirā’, Bāb Adh DHirā’, and the standing stone in Adir, are introduced in panel and slide show by AV screen.

Exhibition Relating with the Iron Age Moab and the King’s Highway (Fig. 6)

The important theme of the prehistory exhibition is the Iron Age Moab and the King’s Highway, considering that Al Karak region is historically part of the area of ‘Moab’ (Miller



6. Exhibition of “ Local History of Al Karak: I”: Iron Age Moabite (Photo by the Author (Oyama)).

1991:1; Routledge 2004:48). The following is the main contents of the exhibition relating with the Iron Age Moab.

Moabite Kingdom and the King's Highway

The area of the Moabite Kingdom and other two kingdoms (the Ammonite Kingdom and the Edomite Kingdom) in the Iron age Jordan, with the sites of their capitals along the King's Highway (‘Ammān, DHībān and Buṣayrah) are shown in the map in order to explain the geo-politics of the Moabite Kingdom. Several important Iron age sites of the Moabite in Al Karak region, such as Al Bālū' and Khirbat Al Muḍaybi', are introduced in the panel as well as slide show of the AV screen in the exhibition room. Wādī Al Mūjib and Wādī Al Ḥasā, which had geo-political importance for the Moabite, are also introduced in the map and slide show.

Al Bālū' Stele, which was found in 1930's at Al Bālū' in Al Karak region and currently displayed in the Jordan Museum, and the SHīhān Stele, which was found in 1851 at Rujm Al 'Abd near Jabal SHīhān area in Al Karak region and currently displayed in the Louvre Museum in Paris, are introduced as photos in the “Moabite Kingdom” panel. Artifacts on display in the exhibition of the Moabite Kingdom includes fragment of basalt statue, which was possibly by the hand of same Moabite workshop as SHīhān stele (Hunziker-Rodewald and Deutsch 2014: 62-63). It is displayed beside the photo of SHīhān Stele for comparison of similarity in artistic style.

Moabite Language

As one of unique local cultural factors of the Iron Age Moabite, the Moabite language is also highlighted in the exhibition. Alphabet of the Moabite script is introduced with comparison of the alphabets of modern Arabic and Latin scripts. Artifacts on display in this section includes “Al Karak Inscription”, which is the basalt fragment with Moabite royal inscription found in Al Karak and obtained by the Jordan Archaeological Museum in ‘Ammān in 1958 (Reed and Winnett 1963; Hunziker-Rodewald and Deutsch 2014: 63), as well as the fragment of circular-shaped basalt object with the Moabite script from 1986 excavation of Al Bālū'. These two artifacts with the Moabite script are displayed next to the replica of the Mesha Stele and an explanation panel of the Moabite language to compare the Moabite scripts.

King Mesha and the Victory of the Moabite

The replica of the Mesha Stele, which was found in 1868 and is on exhibition as the original in the Louvre Museum, is on display. Mesha Stele was found in DHībān, which is in Mādabā region and not in Al Karak region, however considering the importance of Mesha Stele as part of the history of the Iron Age Moabite as well as the Moabite language, it is included in the exhibition of KAM. Several lines of the text in Mesha stele written by the Moabite script are translated into English and Arabic and presented in the panel behind the Mesha stele replica, to narrate the story of the



7. Exhibition of “ Local History of Al Karak:2” (Photo by Hamza Jarajah).

Moabite King Mesha, who defeated the Israelite King Omri in 850 BC, as well as to introduce the Moabite script.

Foreign Relation of the Moabite

The relationship between the Moabite and the dynasties in the surrounding areas such as Egypt and Mesopotamia is discussed here, showing a map of the Moabite Kingdom and surrounding area. As for the relation between Moab and Egypt, the Egyptian campaigns by Tuthmosis III (*ca.* 1482-1450BC) and Ramesses II (*ca.* 1304-1237BC), which probably included the territory of the Moabite in Mādabā and Al Karak area, are explained. Exhibition also introduce one of the Egyptian Hieroglyphic toponyms list of the places conquered by Tuthmosis III (called “Palestinian List” or “Megiddo List”), located in the relief of Karnak Temple at Luxor, mentioning toponym of “*hurkur*” by Egyptian Hieroglyph which can be probably identified as Al Karak (Miller 1991:8)¹³ The relation between the Mesopotamian dynasties and the Moabite Kingdom is discussed in terms of Assyrian rule over the Moab as well as the rebellion of the Moabite, which was a part of allies of Yamani of Ashdod as mentioned in a prism inscription, that occurred during the reign of Sargon II (Salje 2009 :739).

Displayed artefacts in the Iron Age section include a terracotta model of a shrine, which has a relief of two dancing women, possibly

Astarte, holding a tambourine. Displayed artefacts also include pithos from Bālū‘ dating to the iron age and was added to the exhibition after the opening of KAM.

Local History of Al Karak Region: Second Section (Fig. 7)

The second exhibition room, located north of the first room, deal with the Hellenistic/ Nabataean to early Islamic periods. Main themes in this exhibition are as follows;

Nabataean in Al Karak

It includes a display of the Nabataean inscription excavated in DHāt Rās, and the introduction of Nabataean temples in Al Qasr and DHāt Rās, located along the King’s Highway and having potentiality for heritage tourism. The exhibition introduces also the Nabataean relief which was reused as a block of the wall in the northeast of the upper court of Al Karak castle, and indicate the presence of the Nabataean in Al Karak.

Via Nova Traiana/Al Karak in Roman Period

As King’s Highway is a major theme of KAM, the key theme of this exhibition room is *Via Nova Traiana*, constructed between 111 and 114 AD by Emperor Trajan from Bostra to Ayla (Al ‘Aqabah) and passed Al Karak region. Part of this Roman road ran along the King’s Highway (Borstad and Haroun 2010:486; Zayadine 2004:374) In Al Karak region, it ran

13. No.101 of the Palestine list (Meggido list), identification by Donald Redford (Miller 1991:8).



8. Exhibition of “Medieval History of Al Karak Castle and the fortified town of Al Karak” (Photo by the author (Mubaideen)).

almost along the King’s Highway from Wādī Al Mūjib in the north to Wādī Al Ḥasā in the south via Ar Rabbah (*Rabbathmoba/Areopolis*) and Al Karak town area. In the east of the *Via Nova Traiana* exists the line of the Roman fortress (*Limes Arabicus*), such as Al Lajjūn and Qaṣr Bashīr. The Roman milestone of the *Via Nova Traiana* in Wādī Al Mūjib with Latin inscription of the title of Emperor Trajan is introduced as well to promote awareness toward the *Via Nova Traiana* and the Milestones¹⁴.

Rabbathmoba/Areopolis

As one of main cities in Al Karak region, in addition to Al Karak town, in Roman and Byzantine Period (Miller 1991:12-13), Ar Rabbah archaeological site (*Rabbathmoba/Areopolis*) has importance for the local history of Al Karak region as well as potential for heritage tourism in Al Karak area and the King’s Highway. In order to raise awareness toward this important historical city, which is not well known comparing to Al Karak castle, rich urban monuments of *Rabbathmoba/Areopolis*, such as Roman temple in the Diocletianic period and the paved Colonnaded Street (Gysens 2002: 493-496) are introduced here in panels and slide show. Part of the Peutinger map from 3rd or 4th

century showing the city “Rababatora”, which might have been derived from “Rabbathmoba” (Miller 1991:12) is also introduced.

Artifacts excavated in Ar Rabbah are displayed in this section, including Roman large pottery sherd of pithos with bas relief of the two youth, possibly twin, wearing Phrygian cap, and Roman terracotta inkpot in the shape of the head of Apollo wearing the wreath of laurel telling urban lifestyle in Ar Rabbah. In addition, Roman bronze lamp from Al Karak, in the shape of a swan with twin boys, is also on display.

Al Karak in the Byzantine Period

This exhibition introduce Al Karak as Byzantine town depicted and partially preserved in the Mādabā Mosaic Map as a fortified city in Moab named (*Charachmoba* (Χαρα)χυώβα) (Mayer 1990: 120-121; Miller 1991:13), telling the fact that Al Karak was already fortified town before the invasion of the Franks. The Byzantine church in Ar Rabbah (*Rabbathmoba/Areopolis*) (Gysens 2002:495) is also introduced as well. Main displayed artifacts include a Byzantine lamp with three nozzles from Al Lajjūn, possibly indicating the image of the “Tree of Life”, and a Byzantine female figurine from an excavation of a Byzantine tomb in Muḥay.

14. Although this milestone in Wādī Al Mūjib is important heritage as part of *Via Nova Traiana*, it has not been well managed as heritage and not been well noticed by local people as well as tourists, and partially suffered damage, possibly by vandalism.

Battle at Mu'tah

This section introduces the Battle at *Mutah* in 629AD (Al-Hasso 2004:17-18), which was a significant historical event in the early Islamic period as well as the local history of Al Karak, and the historical site of this battle at Mu'tah, which is an archaeological site of the middle Islamic Mosque and one of the important historical monuments along the King's Highway in Al Karak. *Maqāmāt As Saḥābah* in Al Mazār, commemorating martyrs in the battle, are introduced as a religious historical heritage in the south of Al Karak region along the King's Highway.

Medieval History of Al Karak Castle and the Fortified Town of Al Karak (Fig. 8)

The long room facing the west side of the central gallery hall is allocated for the exhibition of the medieval history of Al Karak Castle and the fortified town of Al Karak, focusing on Al Karak during the Ayyubid, Mamluke and Frankish (Crusader) period. This exhibit is very important from a tourism point of view, as its content is directly related to heritage tourism and the interpretation of Al Karak Castle and the historic fortified town of Al Karak. The main themes and components in this exhibition room are as follows;

The Fortified Town of Al Karak

This exhibition introduce the structure of the historical fortified town of Al Karak mainly from defense strategy perspective. Located on the top of a sheer hill surrounded by deep gorges, the town of Al Karak took an advantage of its "natural fortified" terrain. Al Karak Castle is located on a high place in the southern edge of the fortified town. The following defensive feature of fortified Al Karak town and Al Karak castle are introduced

- Walls of fortified Al Karak town: As shown in the historical map of Al Karak town in "Arabia Petraea" by Musil in 1907. Part of the wall still remains in the eastern part of Al Karak town.
- Subterranean tunnel entrance gate to Al Karak town (East and West), which were originally the only accessible gateway to enter Al Karak town (Mayer 1990:118)
- Towers: Seven towers along the wall of

fortified Al Karak town. The location and name of each towers are shown in the Al Karak town model mentioned below.

- Fosses (Ditches): North fosse, located in the northern face of Al Karak castle (southern edge of the fortified Al Karak town) , which separates the castle from the town; and South fosse, located in the southern part (water reservoir) of Al Karak castle, which separates the castle from the hill (Jabal Ath THallājah) facing the south edge of the castle.
- Glacis: located in the southeastern foot of the castle.

The Model of "Al Karak Castle and Fortified Town of Al Karak " (Fig. 9)

A 1:400 scale model of "fortified city of Al Karak and Al Karak Castle" had been produced and exhibited in the previous KAM to raise awareness toward the topographical features and main cultural heritage sites of the historically fortified Al Karak town and introduce the structure of the Al Karak castle and its defense system in relation to fortified Al Karak town. During the closure of KAM, the model was placed in a closed exhibition room, however, it was partially damaged by falling stones and broken glass from skylight. Therefore, after the relocation of the model, restoration work on the model was carried out. Damaged parts of the model were repaired with model putty and clay. Some damaged part of the road and buildings in the model were repainted, and damaged parts of the natural sand ground were repaired with color powder. After the repairment of the model, a new explanation sign showing the main heritage features of Al Karak Castle and town was produced and installed on the model. The name of the sites inside the Al Karak Castle follows the description mentioned in the archaeological research of Al Karak Castle (Brown 2013). Heritage relating with historic fortified town of Al Karak, *i.e.* two subterranean gate entrance (east and west), town wall, five towers along the fortification wall line (Adh DHāhir Baybars Tower (Semi-circular Tower), Al Birkah Tower (Salah Ad Dīn Tower), Al Madrasah Tower (or An Naṣārā Tower), Adh DHāhir Baybars Tower (in the northwestern corner of the town) and



9. Model of Al Karak Castle and Historic Fortified Town Compared with Early 20th Century Map of Al Karak Town by Musil (Photo by Hamza Jarajrah).

Al Tanashāt Towers)¹⁵ are shown in the models. Main historic Mosques and churches as well as historic buildings are shown in the model too. Two large water reservoir in the Al Karak town, shown on the map in *Arabia Petraea* by Musil, are also shown in the model. These two water reservoir do not exist today. The place location of the eastern water reservoir is used now as a bus terminal today and keep the name of the place as “*Al Birkah*” (“water reservoir” in Arabic).

Comparison of Historical Map in Early 20th Century and Satellite Image of Al Karak Town Today

The historical map of Al Karak town in the early 20th century, which was shown in “*Arabia Petraea*” by Alois Musil in 1907¹⁶ and clearly shows a wall of fortified Al Karak town, and a satellite image of modern Al Karak town in 2017, which remain the shape of the historical fortified town, are shown as panels next to the model of Al Karak castle and town to explain

15. The name of the tower is based on description by MOTA who installed signage in each towers. These name follows the local name of towers.

16. Map of Al Karak town shown as “fig. 9. El-Kerak, Situationsplan” (Musil 1907:47).

the topographical shape of historic fortified Al Karak town. This exhibition aim to raise awareness toward archaeological, historical and touristic importance of fortified Al Karak town, including Al Karak castle, by comparison of historical map, satellite image, topographic model and photographs of several sites in fortified Al Karak town.

Siege against Al Karak Castle and Fortified Town

Before the Ayyubid captured Al Karak castle from the Franks in 1188, the fortified town of Al Karak and the castle suffered from several sieges, by Nur ad-Din Zangi and by Salah ad-Din in 1170’s and 1180’s (Pringle 1993: 286-287, Brown 2013b:712-713). The siege warfare in Al Karak is explained in a panel near the model of Al Karak castle and town to explain the fortification system of Al Karak town and castle.

Hajj Route (Darb Al Hajj) and Geo-Political Strategic Importance of Al Karak.

In relation to the main theme of “the King’s Highway” in KAM, Mecca pilgrimage route(*Darb Al Hajj*) passing through Al Karak in the Medieval Islamic period (El-Majali

and Mas'ad 1987: 311-315) is introduced. An overview of the Frankish (the Crusader) invasion against Jordan (*Oultrejordain*) is discussed here too, since the strategic importance of Al Karak as crossing point of the pilgrimage and trade route connecting Syria, Egypt, and the Arabian Peninsula was one of the reasons for the Frankish invasion against Al Karak (Hillenbrand 1999:292).

Construction of Al Karak Castle

The history of Al Karak Castle is introduced here, including the construction of the fortress which begun in 1142 by the Pagan (Payen) the Butler of the Latin Kingdom (Mayer 1990:116; Milwright 2008:29; Brown 1989:287-290; Sinibaldi 2022:130), the history before the presence of the Franks, and the history after the capture of the castle by the Ayyubid and Mamluk dynasties. The part of the mosque wall with arrow slit, which is the part of early Islamic tower possibly during the Jarrahid interlude of 981-982 (Brown 2013a:313) is introduced with the Frankish chapel and middle Islamic Mosque in order to show historical diversity of Al Karak castle.

Salah ad-Din, Raynald of Chatillon and Battle of Hittin

As part of history relating with Al Karak castle and town, this section explain outline stories of Salah ad-Din, Raynald of Châtillon (ca. 1125-1187) who became the lord of *Oultrejordain* and obtained Al Karak castle, aggressive action of Raynald who attacked pilgrimage caravan, victory by Salah ad-Din in the battle of *Hittin* and execution of Raynald, and the capture of Al Karak castle by al-'Adil who was brother of Salah ad-Din (Brown 2013b:712-713; Milwright 2008:31-38).

The Importance of Al Karak for the Ayyubids

The topics introduced here includes Al Karak under the reign of al-Malik al-'Adil, al-Malik al-Muazzam Issa, and Imarat al-Al Karak under al-Malik an-Nasir Daud. Negotiation between the Ayyubids and the Franks during the 5th Crusader for exchange of several important cities except Al Karak and Ash SHawbak is also introduced to present the strategic importance of Al Karak and Ash SHawbak for the Ayyubids (Milwright 2008:38-39; Sinibaldi 2022:125).

Al Karak in the Mamluk Period

This section introduces the story of Sultan Zahir Baybars relating with Al Karak, as well as monuments in Al Karak town built by Baybars including Burj Baybars which hold relief of lion emblem of Sultan Zahir Baybars. Mamlakat Al Karak in Mamluk period is also introduced with focus on Sultan al-Nasir Mohammad (1285-1341) and Sultan al-Nasir Ahmad (1316-1344) who had strong ties with Al Karak (Drory 2005).

Royal Life at Palaces in Al Karak Castle

As showing luxury royal life at Al Karak castle in the middle Islamic period, this exhibition highlights several *Qā'ah* (reception hall) as follows, which possibly existed during the Ayyubid and Mamluk period (Brown 2013a);

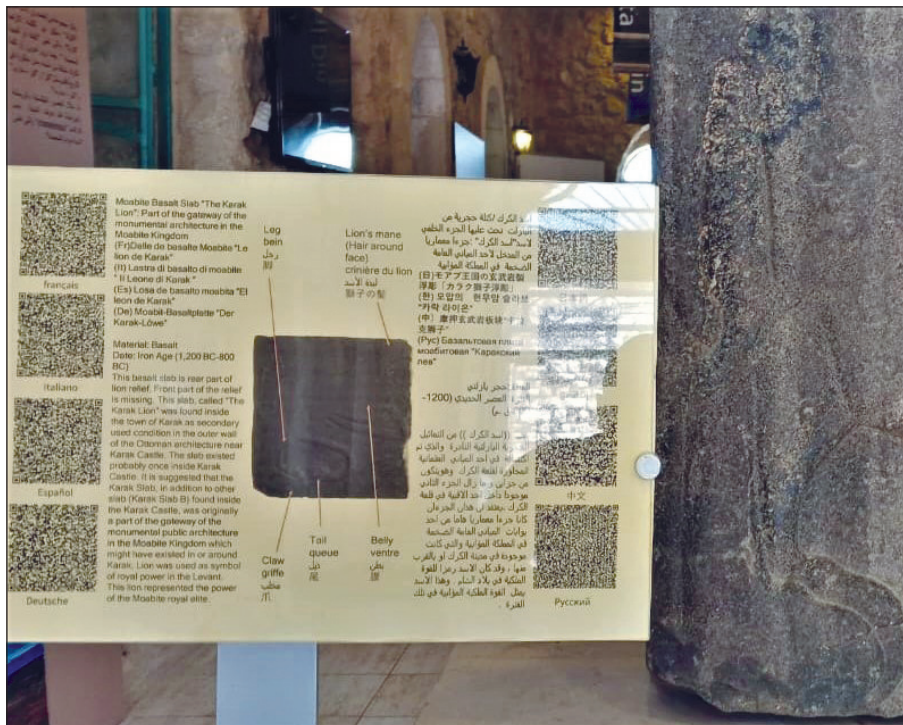
- Qā'at An Nuḥās (Hall of Copper) constructed by Mamluk Sultan an-Nasir Mohammad.
- Grand Qā'ah in the underground level of lower bailey.
- Grand Qā'ah in the Upper Castle (Probably Al Qā'ah An Nāṣiriyyah Hall) constructed by Ayyubid Amir an-Nasir Daud.
- Small Qā'ah in the Upper Castle

Qā'ah mentioned above other than Qā'at An Nuḥās are also shown in the model and the tourism map of Al Karak Castle to raise awareness toward the royal life in Al Karak castle in the middle Islamic period.

Imported glazed ware excavated from Al Karak castle, which was favored by Mamluk ruling class in Al Karak (Brown 1989:297-298) and possibly used for luxury dining in Al Karak castle, are displayed with explanation panel of *Qā'at* in the castle to show luxury royal castle life.

Furusiyyah and Al Karak

During the Mamluk period, Al Karak was considered as a place to learn horsemanship (*Furusiyyah*), and Mamluk Sultan in Cairo often sent his son to Al Karak to learn *Furusiyyah* (Drory 2005 :19). The importance of Al Karak as the place for *Furusiyyah* is introduced, with historical drawing of several actions practiced in *Furusiyyah*. The open terrace of lower bailey of Al Karak castle, which is suitable for military exercises (Brown 2013:309), is also introduced



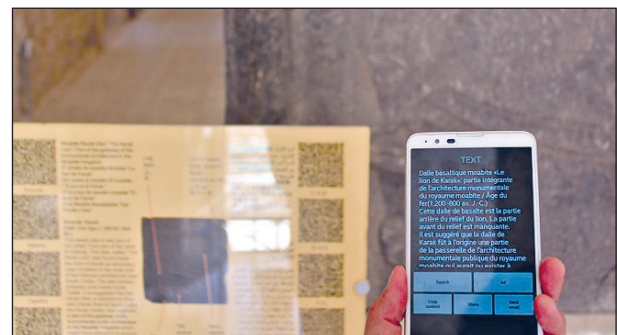
10. Multilingual Caption Label by Two-Dimensional Code ("QR code") (Photo by Hamza Jarajrah).

in relation to *Furusiyyah* in Al Karak. In addition, Medieval iron mail shirt, which was originally exhibited in 'Ammān Archaeological Museum as artifacts from Ayyubid-Mamluk period and moved later to former KAM, is on display with the model of catapult and mobile siege tower covered with skin used for medieval siege warfare.

Introduction of Multilingual Caption Label Using Two-Dimensional Code ("QR code")¹⁷ in the New KAM Exhibition

Considering the international visitors with various language background in Al Karak castle and museum, multilingual explanation using QR code was introduced as a trial on some of the museum labels for the main display objects (Oyama 2019b). In addition to typical bilingual explanation text of Arabic and English as printed text, QR codes converted from explanation text by eight language (French, German, Italian, Spanish, Russian, Japanese, Chinese and Korean) are shown on the large size (A3 size) museum label of important objects. As a total, one museum label can include 10 language explanation texts (Fig. 10). By using mobile application for reading (QR code) in smartphone

or tablet devices, visitors can read explanation text of selected language. Explanation texts of selected language will appear on the screen of visitor's smartphone or tablet (Fig. 11). Since the contents of this QR code is not the hyperlink to the website page or file of explanation text but the converted explanation text itself, it is not necessary to connect to the internet. Without internet connection, visitor can read the text by smart phone. Although this method has limit of text amount to be used, it can be applied to the explanation signage in archaeological sites or museums that have no wi-fi or any internet service for visitors. This multilingual explanation system by QR code is also proposed to be used for signage system in Al Karak castle which was proposed to MOTA.



11. Explanation Text of Displayed Artifacts by Selected Language Appeared in Mobile Phone of Visitor by Reading QR Code.

17. "QR Code", which is a kind of two-dimensional code, is the registered trademark of Denso Wave Incorporated which invented this type of code.

Tour Route inside Al Karak Castle and Al Karak Town Starting from KAM as a Core

In order to make KAM as core of heritage tourism in Al Karak castle, it is preferable to unify design concept of presentation, such as signage, inside Al Karak Castle, with the design of KAM exhibition. Frame design of signage board inside Al Karak Castle were planned based on the same type of design concept of KAM graphic panels, to enhance connection between KAM as core and other heritage sites. A map of the walking tour map at Al Karak castle and town, showing KAM as core/starting points of the tour route, were also produced and distributed at the museum. One side of the map is Al Karak castle map showing main spots inside the castle, same spots as that shown in the model in KAM, and tour route starting from KAM. The other side is historical Al Karak town map showing main heritage spots in the historical fortified town of Al Karak, same spots as that shown in the model at KAM, and tour route starting from KAM. This map was also made following same design concept as KAM exhibition, in order to enhance KAM as core and heritage sites.

Concluding Remarks

Al Karak Archaeological Museum is expected to be a core of heritage tourism network including Al Karak Castle, the historic fortified town of Al Karak, the King's Highway as historical heritage route and other significant archaeological sites in Al Karak region, in particular along the King's Highway. Al Karak Castle attracts a lot of tourists: in 2019, it had 48,938 visitors, and it increased to 146,714 visitors in the year 2022¹⁸. Most of tourists, however, visit solely Al Karak castle. It is expected for KAM to introduce rich cultural heritage of Al Karak in addition to Al Karak castle to tourists, especially cultural heritage in historic fortified town of Al Karak that can bring benefit of tourism to local community of Al Karak if tourist spend more time by walking around the historic town.

Recently Al Karak Municipality has also been working on the rehabilitation of another historic building of Ottoman Saraya complex near KAM to adaptively reuse it as a museum

for Folklore/Living Heritage which will protect living heritage and tradition of Al Karak local community and present it to the tourists. By establishing network and collaboration between KAM and new Folklore museum, it will enrich tourism experience and community awareness toward heritage in Al Karak including Al Karak Castle and historic Al Karak town. Subsequently potentials of developing the concept of networking KAM as core and heritages in Al Karak, similar as ecomuseum, are obtainable, whereas the local community and tourist can aware rich cultural heritage in Al Karak with cultural and historical story. It will develop also awareness by the community-based organizations in Al Karak toward the characteristics and uniqueness of the region.

To fulfil this goal, education and community awareness activities is also essential for KAM. Activities relating with "International Museum Day" proposed by ICOM, which is currently popular in Jordanian museum field, was initiated by former KAM in 2005 with cooperation of JICA technical cooperation project for museum, and several education activities with local schools at Al Karak as well as community involvement programs were implemented by authors (Massadeh and Oyama) including hands on activities (Tarawneh and Massadeh 2007; Oyama 2007a,2007b). After the opening of renovated KAM in 2019, SNS (Facebook) page of KAM was also opened, to raise awareness to KAM, Al Karak castle and heritages in Al Karak to local community and tourists. Recently KAM often receive visit by local school classes in Al Karak. Based on the experience by former KAM, regular education and community awareness activities needs to be implemented to develop KAM as core of heritage awareness in Al Karak local community.

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18. Visitor data based on Ministry of Tourism and Antiquities.

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