A NEW ROMAN ROAD SITE ON AL-KARAK PLATEAU

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Introduction

This paper presents the description and preliminary analysis of a newly discovered Roman road site, found during fieldwork undertaken in 2009 to study the travel networks of al-Karak plateau. The survey fieldwork was purpose-driven, looking for built road sites as well as topographic and ethnographic patterns that affect movement and settlement of population groups. The goal was to study evidence for road networks among the sites found in previous surveys of the plateau. This road survey was part of al-Karak Resources Project (KRP), a multi-disciplinary endeavor that examines how people utilized natural resources, both in the past and the present. The KRP research philosophy considers "communication routes", used for human travel from place to place, as part of the natural resources of al-Karak plateau.

Overall objectives of the road survey included 1) gathering ethnographic data of agricultural and pastoral land use patterns through Bedouin interviews, 2) mapping water resources in relation to natural travel routes, and 3) analyzing the features and patterning of sites from previous surveys. The survey methodology included perusal of topographic maps, vehicle travel along agricultural roads, and interviews with both seasonal Bedouin populations and local residents. For this inaugural survey, only sites from the Miller-Pinkerton survey of al-Karak plateau (Miller 1991) were assessed for contextual analyses[1].

The ethnographic and water resource survey data gathered in 2009 will be reported more fully elsewhere, as will a newly discovered Nabataean water catchment system mentioned here. This report includes a GIS-based presentation of the newly identified Roman road site in its spatial relationship to settlement sites, local terrain, and previously-identified Roman roads and milestones on al-Karak plateau.

The Roman Road (Site RR1)

The 2009 road survey began in the southeast quadrant of al-Karak plateau. This area was chosen because it contains al-Fajj al-'Usaykir, a broad linear valley lying over 100m. lower than its flanking cliffs (Koucky 1987a: 30) that is considered to be a long-term travel thoroughfare (Mattingly 1996: 360; Miller 1991: 124). The southeast quadrant is also the location where the well-known Roman highway, the *Via Nova Traiana*, enters and exits the plateau at the north rim of the Wādī al-Ḥasā. The plateau is spatially divided into quadrants by two modern highways, one east-west between the modern towns of Karak and al-Qaṭrāna, the other north-south from the Wādī al-Mujib to the Wādī Ḥasā.

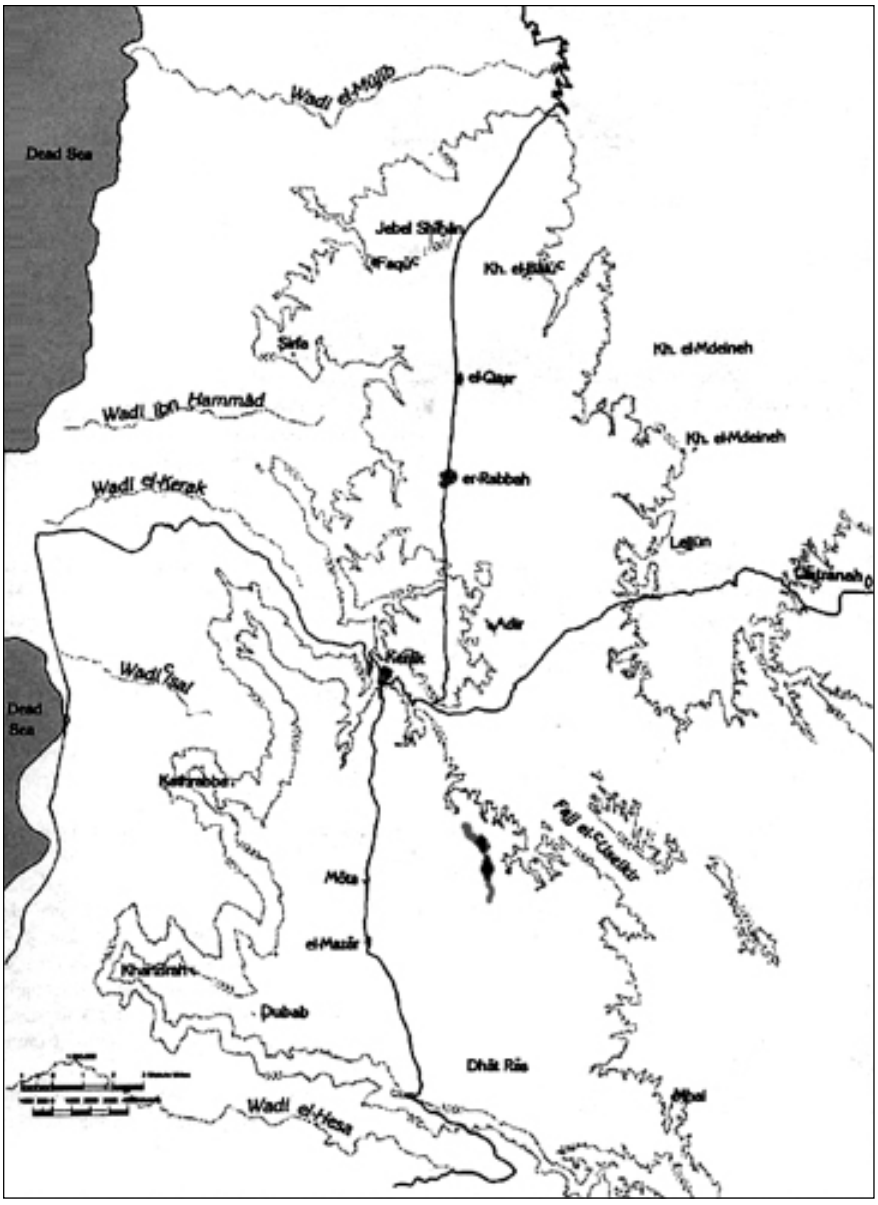
In the survey area we identified two sections of Roman road that are previously unrecorded. In order to spatially assess this new Roman road site in relation to local terrain and settlement sites, a regional map published by the Miller-

1. The names of sites are presented according to current transliteration standards, with older transliterations as they appear in referenced publications. The sites from Miller (1991) are named MPSites. The authors wish to thank the American Schools of Oriental Research (ASOR), J. Maxwell Miller, and Duane Calhoun for their kind permission to use their published maps. The 2009 Road Survey was made possible through the generous support of the Karak Resources Project and its director, Gerald Mattingly. Raid Baquin was an essential team member as the Environmental Survey leader. We wish to thank the Department of Antiquities and its director Fawwaz Khraysheh for support and for the helpful participation of Akram Otoum, representative.

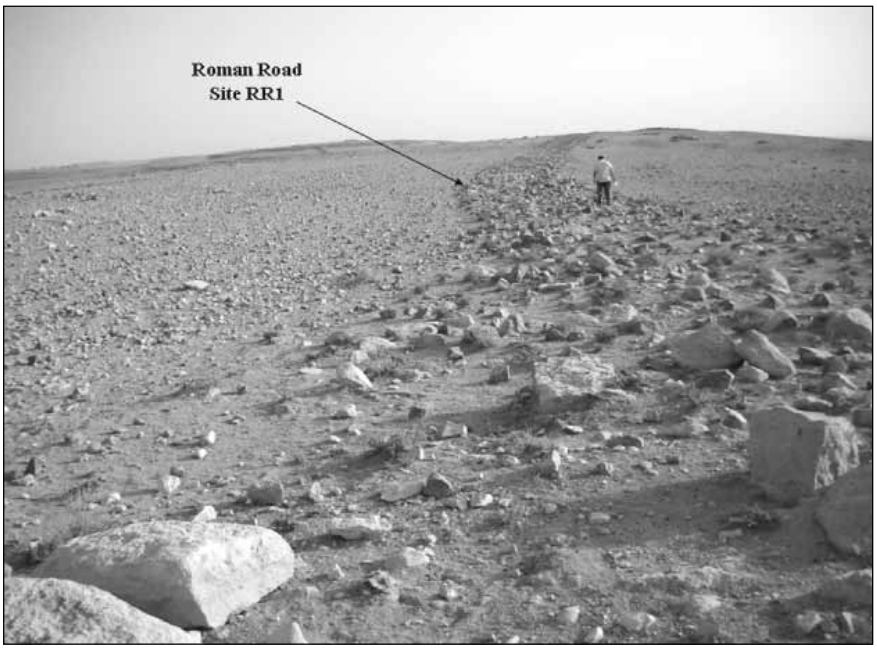
Pinkerton archaeological survey (Miller 1991: 2) was geo-referenced using ArcGIS software (ESRI 2003). Geo-referencing is a GIS process that turns paper maps into digital landscapes with coordinate points where sites can be viewed together in accurate spatial relation to each other.

The newly discovered Roman road sections lie along an isolated ridge, with the landscape descending to a wadi on the west and to al-Fajj al-'Usaykir (hereafter, al-Fajj) on the east (**Fig. 1**). The two road sections are treated here as one site, named RR1, with a north and a south segment. The north and south segments are separated by a plowed field where there is a dip, or "saddle", in the ridge line. The north segment of RR1 is approximately 250 meters long and curves towards the west. The south segment is approximately 480 meters long on a straight north-south alignment.

The road remains consist of rows of basalt cobbles embedded in the ground (**Fig. 2**); its construction is consistent with roads beside Roman milestones south of Wādī al-Ḥasā (K. Borstad, personal observation). The width of the roadbed varies considerably, having been disturbed in both segments: on the south segment, agricultural activities and a modern dirt



1. Roman road site RR1 shown as black diamond shapes in the southeast quadrant of al-Karak plateau. The thick grey line to either side indicates the ridge area surveyed.



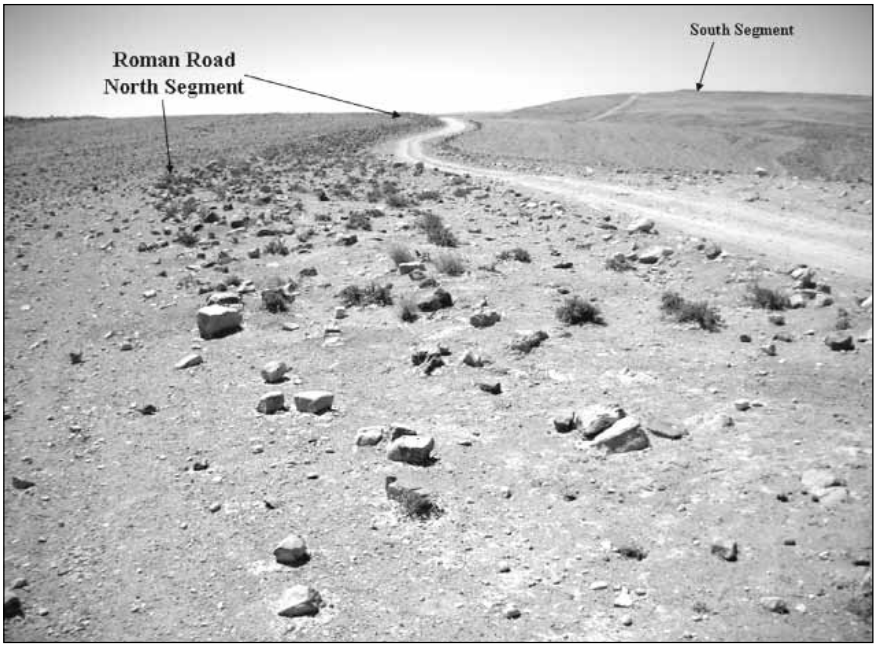
2. Roman road Site RR1 as first identified, view to the north.

track have narrowed the Roman roadbed and the north segment has been intersected by the same modern dirt track (**Fig. 3**).

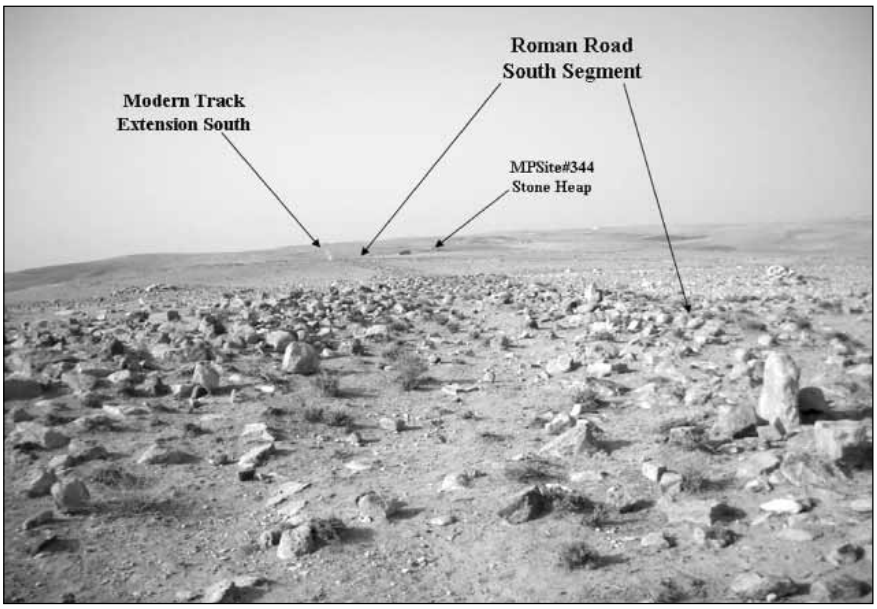
The cobbles of the south segment fade away at each end near large stone heaps. These stone heaps were designated as archaeological sites in previous survey (MPSites 343 and 344, Miller 1991: 130) and appear to have been created with cobbles robbed from the RR1 roadbed. Survey further on the ridge, both north and south of RR1, revealed no additional sections of Roman road remains. However, the modern dirt track, mentioned above and well-used, extends southwards from the stone heap MPSite344 and is a most probable continuation of the Roman road route (**Fig. 4**).

Topographical Context

Site RR1 is notable for its location in the landscape, not contingent to settlement sites but



3. Northern-most point of RR1, view to the southeast. Note modern dirt track/road beside Roman roadbed.



4. Site RR1, south segment, view to south. Stone heap marks end of distinctive roadbed remains. Modern dirt track continues along ridge to south.

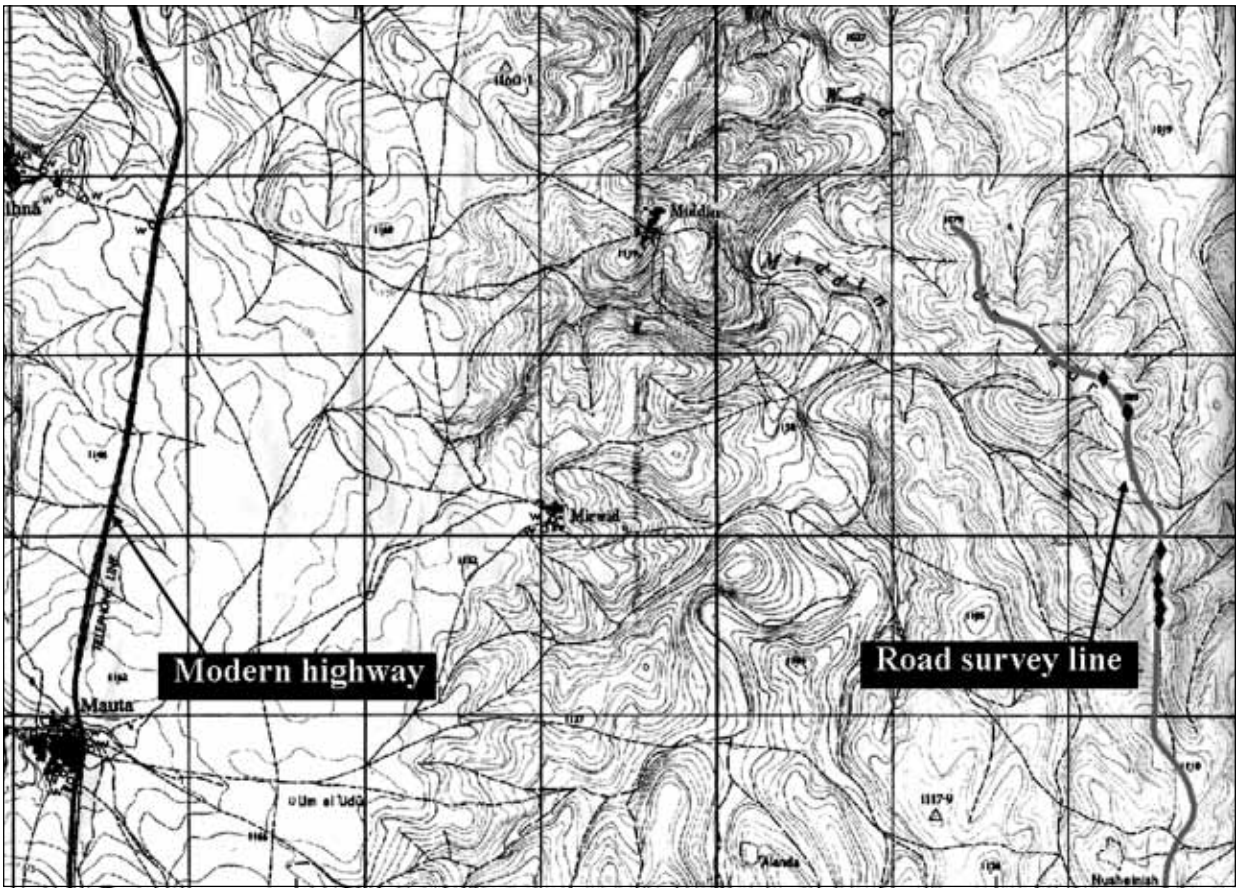
rather situated along a ridge of high land that is difficult to access from east and west. To represent the terrain, a section of al-Karak map from the Hunting Survey 1:25,000 series was geo-referenced. The RR1 coordinate points, represented by diamond shapes, and the line of survey along the ridge, represented by a thick grey line, were added. As seen in this visual representation, the terrain to the west of RR1 is the Wādī Middīn, a steep valley filled with high hills (**Fig. 5**). Due to the steep hills in the wadi there is no direct way to the ridge from the west; access during survey was very difficult.

The eastern terrain slopes steeply away from the south segment of RR1 towards al-Fajj, which cannot be seen from this point. However, further north, at the saddle of the ridge where a plowed field separates the two RR1 segments, the slope to al-Fajj is less steep. Access eastwards at this point is relatively easy, although the north segment of RR1 turns here in a westward direction.

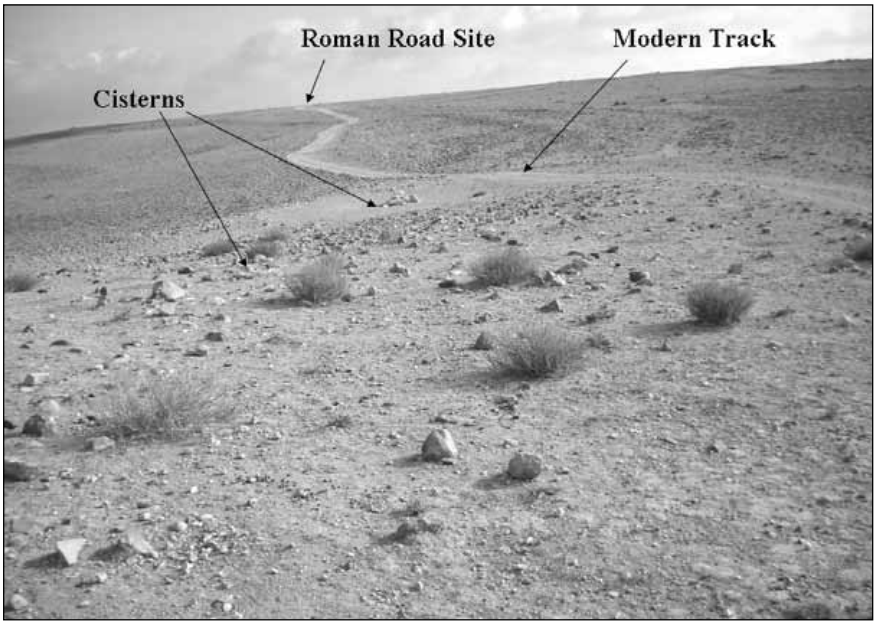
Only one settlement site lies in relative proximity to RR1, although it is 1.5km south along the modern dirt track. This settlement site is not situated on the ridge itself but occupies the top of a steep hill in the wadi to the west of it. The settlement ruin is Nushaynish, a large Nabataean village (MPSite353 Kh. en-Nsheinish, Miller 1991: 131-2; cf. **Fig. 5**, above, Nushaynish at lower right). A water catchment system lay by the modern dirt track, and so directly across the valley from Nushaynish. This constructed system, including four cisterns and two water channels (**Fig. 6**) is previously unrecorded. It appears to be Nabataean in date, according to field reading of the surface pottery gathered there, and is significant as the only accessible water along the ridge.

On the ridge itself, previous survey found ten sites that lie in proximity to Site RR1, although RR1 was not identified at that time (**Fig. 7**). Analysis of the published descriptions of these sites reveal that they are stone heaps, all but three with no discernable construction features. The three with possible features appeared to have wall lines measuring 3x3 or 5x5 meters, suggesting that they were collapsed watchtowers (MPSites 335, 341, 344; Miller 1991: 128-130) or possibly small way stations. This pattern of stone heaps or cairns, and way stations or watchtowers is consistent with a road isolated from settlements.

Clearly the route of the Roman road represented by RR1 was placed in rugged terrain isolated from settlements. Most particularly, the RR1 site is distant from the expected Roman road route: the modern highway is the location considered by scholars today as the main long-term travel artery through al-Karak plateau, the route of the first Roman highway in the region, the *Via Nova Traiana* built in 111AD over an earlier road, an ancient King's Highway (e.g. Koucky 1987b: 71; Graf *et al*. 1992: 783). A pattern of long-term settlements along the modern

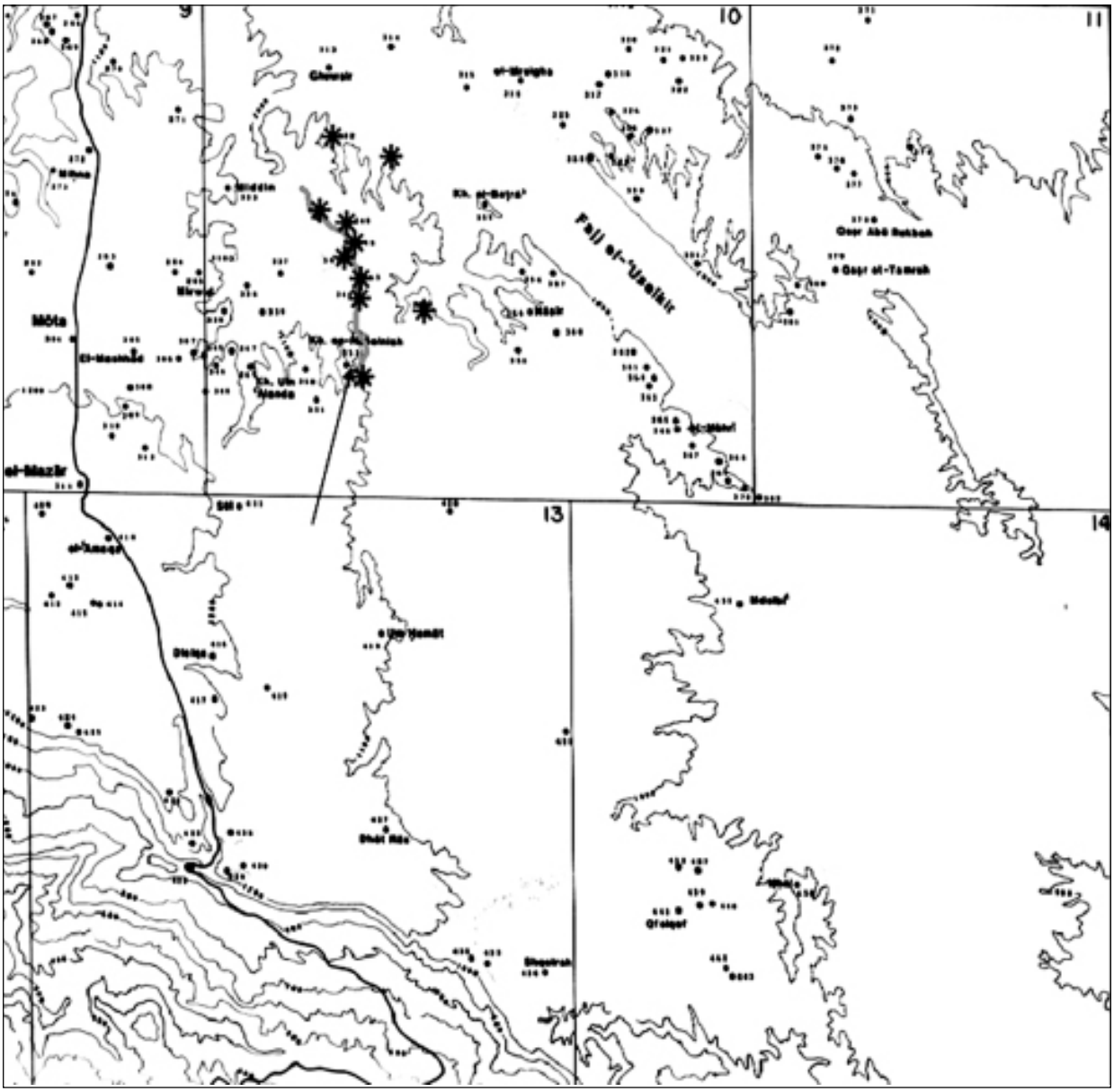


5. Section of Karak map from Hunting survey 1:25,000 series. Coordinates from RR1 are shown as diamond shapes; thick grey line shows extent of road survey



6. A portion of Nabataean water catchment system along modern dirt track south of Site RR1, view to north.

highway suggests that it was indeed the indigenous travel route (Borstad and Haroun 2009: 2). The presence of two Roman milestones near the town of Mu'ta on the modern highway (cf.



7. A portion of the site map from Miller (1991). Asterisks highlight sites in proximity to RR1. Arrow points to Nushaynish (Kh. en-Nsheinish). Note Dhāt Rās in center right of Map Area 13 and al-Muraygha (el-Mreigha) in upper center of Map Area 10.

Fig. 5, Mu'ta, lower left), contribute to the interpretation of this route as the *Via Nova Traiana* (hereafter, *Via Nova*). However, the new data of Site RR1's location remote from the modern highway requires a re-assessment of the presumed Roman road network and an attempt to determine whether a new network including the RR1 site can be inferred from the available data.

Historical Context

Perhaps the closest we can come to constructing a new view of the Roman road network on al-Karak plateau is to locate RR1 spatially among other Roman sites that were found before the advent of modern development caused their disappearance. Most helpful in this regard is a map of Roman roads, milestones, and sites as they were discovered and recorded by Western explorers to the Roman provinces of Palaestine, Syria, and Arabia in the 1800's and published by Peter Thomsen in 1917.

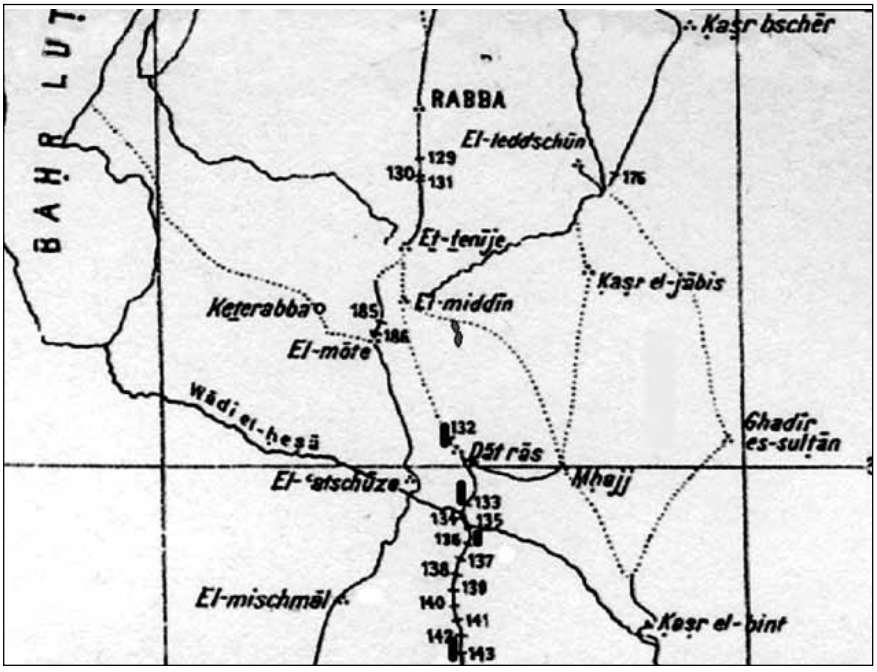
The map that resulted from Thomsen's

compilation of recorded site coordinates presents milestones as numbered points and roads as solid lines (Thomsen 1917: map 1). By georeferencing the al-Karak portion of Thomsen's map and adding the Site RR1 coordinates, aspects of a new model of road networks may be more readily observed. For example, to determine a northern connection between Site RR1 and the known Roman network, indicated by milestones 129, 130, and 131 (upper center of **Fig. 8**), the most helpful information is the pair of dotted lines indicating two Roman roads running south from the village eth-Thaniyyeh (et-Tenije;_cf. ath-Thaniyyeh, Miller 1991: 91).

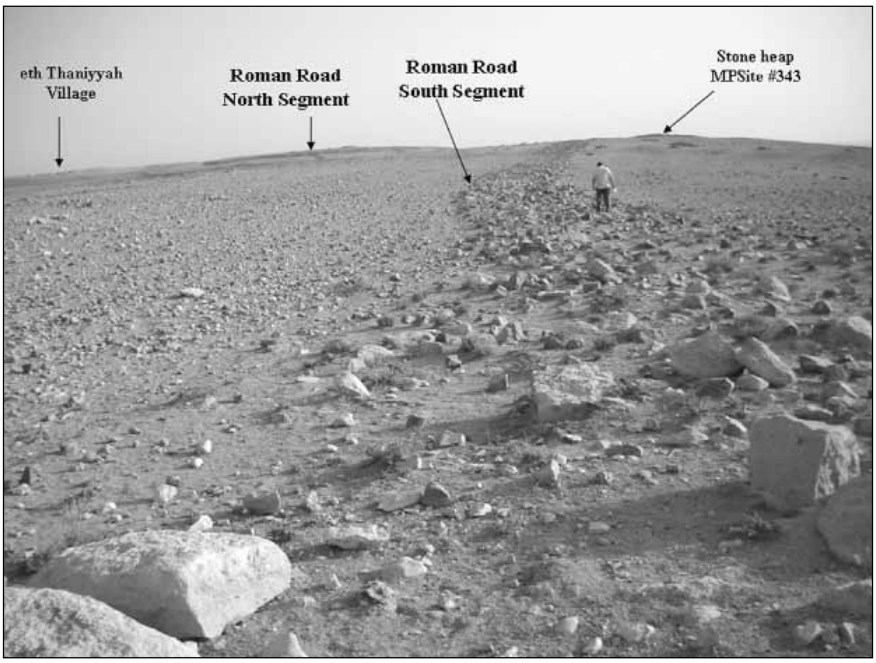
Although marked by dotted lines, meaning their locations were considered uncertain by the mapmaker, the eastern line leads towards RR1. Recent survey observations noted that ath-Thaniyyah lies near the crossing of the main north-south and east-west routes through al-Karak plateau (Koucky 1987a: 32); its eastern slopes provide a more direct route south than the current modern road that curves sharply towards al-Karak town (cf. **Fig. 1**). The village of ath-Thaniyyah is occupied today and visible in the distance from the RR1 site (**Fig. 9**).

To the south, the most direct connection for placing Site RR1 within the Roman road network would be along a straight alignment past the village Dhāt Rās (Dat ras in **Fig. 8**), then south along the Roman road to the milestones of the *Via Nova* in Wādī al-Ḥasā. Note that the road from Dhāt Rās, south to the milestones at the al-Ḥasā rim, is a solid line; the former presence of this Roman road was confirmed in our 2009 survey by an elderly resident who described the location and features of a black cobbled road south of Dhāt Rās that was dismantled in the 1950's.

Several of the Roman road remains in Wādī al-Ḥasā have been re-surveyed in recent times; their coordinate points were added to Thomsen's geo-referenced map as a check on the accuracy of his coordinates. Two coordinates, represented by black columns in **Fig. 8**, are from the Wādī al-Ḥasā survey: milestones at Thomsen's # 143 and the Roman bridge at #136 (Macdonald 1988: 374). Another recently obtained coordinate point is displayed at #133 (near al-ʿAyna village, cf. Thomsen 1917: 52); and one near Dhāt Rās (displayed at Thomsen #132) taken to confirm the location of the Roman temple there, since the milestone has disappeared (both by K. Borstad, 2009). It is apparent that Site RR1 fits well into a new Roman road network along a direct route between Dhāt Rās and the milestones north of ath-Thaniyyah, without any necessity for the road to curve west and merge with the modern highway route.



8. al-Karak portion of Thomsen (1917) map. Milestone locations are indicated by numbers. Lines in solid black indicate roads, dotted lines indicate speculative roads that the map maker considered to be "uncertain". Black columns indicate coordinate points from recent surveys.



9. Site RR1, south segment, with ath-Thaniyyah village visible to north.

Conclusion

It is our working hypothesis that Site RR1 is part of the *Via Nova* through al-Karak plateau. The earliest milestones of the *Via Nova*, from 111 AD, are attested to the south in the Wādī al-Ḥasā, and in the north at Wādī al-Mujib (cf. Borstad 2008: 65). The RR1 site is in a direct alignment with these earliest milestones. A strong case can be made for the *Via Nova* built as a separate Roman road, parallel to the indigenous route along the line of long-term settlements on al-Karak plateau. As such, it is a logical continuation of the *Via Nova* south of the Wādī al-Ḥasā, also built on a separate route (cf. MacDonald 1988: Fig. 57).

The definitive evidence of Site RR1 presents us with a new model for travel networks in Roman times and therefore requires a re-assessment of regional settlement locations and functions. For example, Dhāt Rās can now be seen as the entry/exit gateway town for Roman government traffic, its milestone marking a junction of the *Via Nova* with a road west from Muhayy (cf. **Fig. 8** Muḥajj; Mhai, Miller 1991: 163-6). Likewise, the Roman fortified camp at Umm Ḥamāṭ, directly north of Dhāt Rās, seen by Musil long ago but now disappeared (Miller 1991: 153-4), helps us to secure the *Via Nova* route's new alignment.

The construction of Roman highways had repercussions on settlements, but the location of indigenous settlements also likely affected the placement of Roman highways. The fact of Site RR1's location remote from the settlements to the west suggests that there was a reason for its placement, built to avoid towns when traveling north-south through al-Karak plateau. The obvious reason would be that *Via Nova* travelers needed to avoid inter-community roads likely much used for economic and social daily use, crowded with vehicular and pedestrian traffic. The corollary is that the *Via Nova* was purpose-built as a route reserved for rapid transit, to avoid crowded ways with slower-moving people and animals. Side roads would provide ready, marked access to provisioning stations and hostelries reserved for government travelers.

Further study of the region surrounding Site RR1 is planned as we wish to field research the reports of Roman roads between Mu'ta and Middīn (Alt 1937: 240-1), now that Site RR1 is established as lying just southeast of Middīn. A possible survey strategy would search for an eastward extension of the well-known Roman road (Mittman 1988: 178) that runs up the escarpment from the Dead Sea (marked as a junction with the indigenous road by the milestones near Mu'ta), then connecting with RR1 at the ridge saddle, and continuing eastward past al-Muraygha, an extensive walled town in al-Fajj

located at a natural crossroads (el-Mreigha, Miller 1991: 124, with references). This major site, overlooking a natural thoroughfare, could now be proposed as a significant entry point for traffic from the east with connections across the plateau to the Dead Sea.

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