



## Appendix 1. Site Index

### Abbreviations

AAJ: Aerial archaeology in Jordan

APAAME: Aerial Photographic Archive for Archaeology in the Middle East

GE: Google Earth

HAS: Hunting Aerosurveys Ltd.

### **MAD\_0001.**

No MEGA-J entry.

Deeply eroded limestone slope with natural caves

HAS: Barely visible

GE: perfect through imagery (Nov 2003-Jan 2014). New house has been built immediately to the east between Feb 2010 and Dec 2012

AAJ: APAAME\_20100516\_DLK-0097-8; RHB-0147-8; SES-0046; FFR-0032.

Likely natural erosion rather than an anthropised landscape, but ashy soil suggests human occupation.

### **MAD\_0002. Rujm al Jazel/Dschazel.**

Watch-tower (Conder 1889: 206).

HAS: Ruin is free of modern activity, but not much is visible.

GE: The site is under a vineyard through imagery (Nov 2003-May 2013).

AAJ: Disturbance related to accessing the vineyard with a tractor is visible in APAAME\_20111010\_MND-0064-66.

Heap of stones marking a central fort and foundations around it (Tristram 1873: 332); Name means 'the large cairn'. Foundations of a watch tower by the road (Conder 1889: 206). Musil (1907: 266) only mentions it in passing. No clear evidence of Conder's tower is visible in the AAJ imagery, by which time the ruin had been considerably disturbed. However, several cupmarks are visible and a possible small winery as well as remnants of a W-E double parament wall line (AZ after AAJ).

### **MAD\_0003. Madaba**

City

View individual subsites for information.

### **MAD\_0004. Madaba / Burnt Palace.**

MEGA-J: 3036

Residence (LA-Byz)

GE: Perfect condition in May 2013.

Protected site. Bikai & Dailey 1996: 27-8, plan no. 5-6.

### **MAD\_0005. Madaba / Bajali quarter.**

MEGA-J: 3042

Houses (Byz-Umm)

GE: Perfect condition in May 2013.



Protected site. Bikai & Dailey 1996: 35, plan no. 12; Acconci & Gabrieli 1994; Acconci et al. 1993.

**MAD\_0006. Madaba Cistern.**

MEGA-J: 3043

Two cisterns

GE: Perfect condition in May 2013.

Protected site. Site is in the garden of the Mosaic school of Madaba.

**MAD\_0007. Madaba / Roman Road**

MEGA-J: 3037

Road.

GE: Perfect condition in May 2013

Protected site, part of the Burnt Palace site and Archaeological Park. Bikai & Dailey 1996: 29, plan no. 6.

**MAD\_0008. Madaba / Church of Elias and Crypt of Elianus**

MEGA-J: 2917

Church (early-7th c.)/chapel (late-6th c.)

GE: Perfect condition in May 2013 (GE)

Protected site. Site is included in the Madaba Archaeological Park. Bikai & Dailey 1996: 33-4, plan no. 10; Séjourné 1897; Piccirillo 1989: 67-75.

**MAD\_0009. Madaba / es Sunna' Church**

MEGA-J: 3040

Church

GE: good condition in May 2013 (GE)

Protected by concrete perimeter. Bikai & Dailey 1996: 34, plan no. 11; Manfredi 1899: 159-60.

**MAD\_0010. Madaba / Salayta Church**

MEGA-J: 3041

Church

GE: It appears like a ticket booth or small museum/other building was built immediately S of the site before June 2006 (GE).

"Parts of remaining mosaics removed and church reburied, space is now an empty lot" (Bikai & Dailey 1996: 35).

Bikai & Dailey 1996: 35, plan no. 13; Van Elderen 1972.

**MAD\_0011. Madaba / Museum**

MEGA-J: 58806

Museum

GE: Perfect condition in May 2013 (GE).



Opened in 1962, now a protected site (Bikai & Dailey 1996: 12).

**MAD\_0012. Madaba / Apostles Church**

MEGA-J: 3044

Church (6<sup>th</sup> c.)

GE: Perfect condition in May 2013 (GE).

Protected site (with guard). Bikai & Dailey 1996: 39-40, plan no. 19; Lux 1968.

**MEGA\_0013. Madaba / Mosque**

No MEGA-J entry.

Mosque (late 19<sup>th</sup>/early 20<sup>th</sup> c.).

Protected site / worship. Bikai & Dailey 1996: 60, plan no. 30.

**MEGA\_0014. Madaba / Archaeological Park**

MEGA-J: 3039

Part-open-air museum

GE: Perfect condition in May 2013 (GE)

Open in the late 1990s. Protected site.

**MAD\_0015. Church of St George/Madaba Mosaic Map**

MEGA-J:3035

Church

Protected site/worship

The modern church of St George was built by dismantling the Eastern gate of the city of Madaba (Manfredi 1899: 150-1); Bikai & Dailey 1996: 25-6, plan no. 3; Schumacher 1895 Pl. 2 (the first sketch, dated 1891, of the Byzantine monoapsial church containing the map before construction of the Orthodox church started in 1896).

**MAD\_0016. Madaba City Tell Excavations**

MEGA-J: 11183

Tell

Unknown status, possibly protected. Bikai & Dailey 1996: 36, plan no. 16; (ahead of the beginning of excavations); Excavation reports: Harrison et al. 2000; 2003; Foran et al. 2004.

**MAD\_0017.**

No MEGA-J entry for site.

Dams

HAS: not visible.

Various dams likely located S of the reservoir (MAD\_0019) on the wadi Madaba. No specific position is given by Tristram (1873: 326-7); Conder (1889: 182) also mentions that the Madaba reservoir had been built by damming the valley.

**MAD\_0018. Madaba / Reservoir Tower or Gate.**



No MEGA-J entry for site.  
Defensive tower.

HAS: still visible as a ruin.  
GE: obliterated under modern house before Nov 2003

Conder (1889: 182) gives its measurements as 30x25 ft; For (Musil 1907: 120) this was a Gate ('Tor').

#### **MAD\_0019. Madaba City Reservoir 1.**

MEGA-J: 58795  
Reservoir.

HAS: perimeter still visible, but reservoir used as a field and two houses encroached on its edges  
GE: Several houses have been built on the N edge of the reservoir by Nov 2003 and more inside the perimeter by May 2013.  
AAJ: APAAME\_20130414\_DLK-0319.

Perfect condition, but used as a tobacco field. Area given as 120 square yards (Tristram 1873: 327); 308 ft. x 398 ft., 10 ft. deep, built by damming the valley, two flights of steps led down to the bottom along the E wall of the reservoir (Conder 1889: 182) ; Its quadrated blocks are being used for modern construction, e.g. building the houses of the clergy (Musil 1907: 120); "Still relatively well preserved although it has suffered considerable destruction and modification due to stone-robbing and recent construction...At the present time five modern structures have been built within the reservoir itself" (Bikai & Dailey 1996: 25); Bikai & Dailey 1996 plan no. 2 (95x104 m). It is called a 'Teich', or 'pool' on the 1918 German 1:50,000 Palestine Map 81. Mādeba Sheet.

#### **MAD\_0020. Madaba City Reservoir 2.**

No MEGA-J entry for site.  
Reservoir.

German aerial photos: Laufende 1186 Fliegernummer 1077 (01/05/1918). Site is visible as an irregularly shaped pool filled with water

HAS: Visible, but not as a structure.

GE: refurbished in modern times and still in very good condition (Nov 2003 - May 2013).

AAJ: APAAME\_20110930\_DLK-0005-7; MND-0022, 00025-6, which show that the stairs and plastering are entirely modern.

This reservoir is not mentioned in any of the early travellers' reports and it is not present in the ACOR Plan (Bikai & Dailey 1996). While a quarry or some kind of depression where water accumulated was no doubt present here in the 19th c., it is likely that this was not an ancient reservoir (AZ).

'Vasca temporanea' (Manfredi 1899).

#### **MAD\_0021. Madaba / al-Mishnaqa.**

No MEGA-J entry for site.  
Monastery (anc.), cemetery (mod.).

German aerial photos: Laufende 1186 Fliegernummer 1077 (01/05/1918). Visible

HAS: Visible

GE: Still used as a cemetery a Catholic cemetery (May 2013)

ca. 320 W of the city of Madaba lies the Catholic cemetery (established around 1880), whose entrance is constituted by a set of two columns and architrave (AZ).



“On the W side of the city are the foundations of a temple built of large stones...its eastern wall survives...at the entrance of one of the courts are two Doric columns with later capitals and a coarse architrave. Inside one of the courts is a large well” (Burkhardt 1822: 366); Two columns with small capitals and architrave. One capital is Ionic the other Corinthian, probably remains of a temple (Tristram 1873: 322-3). A church ca. 30 m long, badly preserved. Along the N aisle, a cistern and a crypt were dug, the latter presumably for the monks of this monastery. Little excavation has been done possible owing to the cemetery. Two columns still standing at entrance topped with capitals - these probably belonged to an earlier temple (Manfredi 1899: 164-5). Ruins of a monastery and church were preserved underneath the cemetery, though no longer visible by Musil (Musil 1907: 121). Bikai & Dailey 1996: 25, plan no. 1.

**MAD\_0022. Madaba / Ruined Ottoman Houses.**

No MEGA-J entry for site.

Ottoman houses (ca. 1920).

HAS: Visible

GE: Optimal condition (May 2013)

Bikai & Dailey 1996: 72 (and plan no. 37): group of houses originally belonging to the Marar and Sawalha families. Roof is gone but there are several intact arches and walls. The authors suggested restoration.

**MAD\_0023. Madaba / Debris.**

No MEGA-J entry for site.

Debris – no structure.

GE: Area used as a car park (May 2013)

AAJ: APAAME\_20130414\_DLK-0310.

Not much is extant, probably only blocks from other buildings.

**MAD\_0024. Madaba / Cathedral Church.**

MEGA-J:3045

Church, chapels, cistern (6th-7th c.)

HAS: not visible.

GE: between Nov 2010 and May 2013 the area was cleaned and sand was poured over the mosaic panels of the main church.

AAJ: APAAME\_20101008\_DLK-0008; 20130414\_DLK-0311; 20130414\_MND-0458

Part of its grounds are owned by DoA since 1990s (Bikai & Dailey 1996: 37); Vandalism in 1981 led to destruction of baptistery chapel (Bikai & Dailey 1996: 37-9 and plan no. 18). Piccirillo 1989: 21-40.

**MAD\_0025. Madaba / Latin Convent & Catholic Church.**

No MEGA-J entry for site.

Convent/worship.

HAS: Visible

GE: Still in use and well maintained (May 2013)



Bikai & Dailey 1996 plan no. 33; Built from 1883, initially a crude chapel. Works continued under Manfredi who completed an L-shaped chapel in 1894, and then all the way to 1964 when a church was added to the N (Bikai & Dailey 1996: 64-6). An underground museum showing burials and foundations is located inside the church (AZ).

**MAD\_0026. Madaba / Church of the Virgin.**

MEGA-J: 3038.

Church (late 6<sup>th</sup>-7<sup>th</sup> c.).

GE: Perfect condition in May 2013.

Protected site, expropriated since 1972. Site is included in the Madaba Archaeological Park. Musil 1907: 119; Bikai & Dailey 1996: 33-4, plan no. 7; Piccirillo 1989: 67-75;

**MAD\_0027. Tell Jalul.**

MEGA-J: 2692.

Tell.

German aerial photos: Laufende 1162 Fliegernummer 2892 (11/09/1918). Mistakenly referred to as 'et Turkmanije'. HAS: Visible.

GE: Good condition (Apr 2013).

AAJ: APAAME\_20091022\_SES-0081.

Tristram 1873: 240 (no info of relevance); Glueck mentions the tell with EI dominant and MB-LB pottery (Glueck 1933-4: 5, no. 50); Ibach mentions also cisterns along the lower slopes and a modern Bani Sakhr cemetery in the SW area of the tell (Ibach 1987: 13 Hesban Regional Survey Site no. 26); Gane et al. 2009 (containing other Madaba Plains Project references).

**MAD\_0028.**

No MEGA-J entry for site.

Road.

HAS: Visible.

GE: Covered in gravel before Nov 2003 and received tarmac before Nov 2004.

This is clearly the continuation of the road NW of Tell Jalul [MAD\_0029].

**MAD\_0029.**

No MEGA-J entry for site.

Road.

HAS: Visible.

GE: Still in perfect condition in Apr 2013

AAJ: Optimal condition in Oct 2014 (APAAME\_20141028\_DLK-0242).

**MAD\_0030.**

No MEGA-J entry for site.

Road.

HAS: faintly visible.

GE: Mostly obliterated by modern road. Only a small section is visible just W of the bend of the modern road (Apr 2013).

This is clearly the continuation of the road NW of Tell Jalul [MAD\_0029].

**MAD\_0031.**

No MEGA-J entry for site.  
Road.

HAS: Visible

GE: It is the continuation ca. 1 km S of MAD\_0030 as visible in GE imagery (Nov 2004), cut at ca. 850 m S of MAD\_0030 by road construction beginning before Dec 2009 (GE).

AAJ: photography 'Jalul Road 8' (e.g. APAAME\_20141028\_DLK-0235-7; NQ-0028-9) is taken just a few hundred metres E of this section of road.

**MAD\_0032.**

No MEGA-J entry for site.  
Road.

HAS: Visible.

GE: still very well preserved at the W edge of an olive orchard in Oct 2014.

AAJ: APAAME\_20141028\_REB-0192.

**MAD\_0033.**

No MEGA-J entry for site.  
Road.

HAS: Visible.

GE: Excellent condition (May 2013)

AAJ: APAAME\_20130414\_MND-0467). Image APAAME\_20130414\_MND-0467 stands just E of the perimeter of a modern house and its walled garden.

Regular monitoring of this tract is highly recommended owing to the vicinity of modern house and Bedouin tents being set up here in the Spring. The ring road will cut across this road ca. 1 km N of this point. A test trench investigating its stratigraphy would be recommended.

**MAD\_0034. Sufa.**

MEGA-J: 11172  
Houses (Byz & Ott.); cistern, tombs

HAS: Ottoman house and ruins visible in HAS.

AAJ: Some large looting pits seem to appear in 2009 (APAAME\_20090930\_MJN-59). Good overall condition in Oct2014, though modern farm has certainly destroyed earlier architecture and contributed to the partial dismantling of the Ottoman house (APAAME\_20141013\_RHB-0187-9; MND-308-9).

Scatter of Rom-Byz date (Glueck 1937-9: 137 (no. 191)); Musil 1907: 125-6. Ottoman house and courtyard enveloped by modern sheepfold/farm. To the north of this, a probably Byzantine dwelling with 4+ rooms and central courtyard is visible, flanked by at least two natural caves (perhaps used as cisterns) to the east. Further north, east and west of the modern farm are other ruins, including what are likely tombs and a vaulted cistern (AZ after AAJ images).

**MAD\_0035. Kefeir Abu Khinan (West) / Kefeir al Wusta / Kh. Al Kufeir.**

MEGA-J: 5693  
Vaulted structures, cisterns

HAS: Visible.





GE: Built over before Nov 2003.

AAJ: Only structures that survive in May 2010 are located at the centre of the hamlet. This is a vaulted structure, potentially a cistern (APAAME\_20100519\_SES-0011). Other imagery: APAAME\_20100519\_RHB-0024-5; SES\_0010; DLK-0011.

Kefeir al Wusta/Abu Khan. Ruins are those of a Byzantine village. Several vaults are discussed in detail as is a *birkeh* (Conder 1889: 138-140); Kfer Abu Khinan. Many vaults and an Islamic prayer house (*masalli?*) built out of ruins. Left and right of the road passing along the site are many cisterns, some currently being restored (Musil 1907: 216-7); Kefeir Abu Khinan. Vaulted structures, caves, one with a cistern inside, one standing column perhaps a milestone. Inspected in 1974 when some of the extant vaults were used as animal folds and for grain storage (Ibach 1987: 25 no. 111, 192); Piccirillo 1989: 309.

Ruins at the centre of the village are threatened by a house lying immediately to the N. Fencing is recommended, also for reasons of security.

#### **MAD\_0036. Kefeir Abu Khinan (East) / Kfeir esh-Sherky.**

MEGA-J: 11187, (11186 is a duplicate record).

Vaulted structures, cisterns, caves (Ibach)

HAS: Several wall lines visible, where only one modern farm had been established on site.

GE: Built over before Nov 2003 but several wall lines still visible to the SE of centre point in imagery from Feb 2013.

AAJ: APAAME\_20100519\_DLK-0012; RHB-0026

Kefeir esh-Sherky. Foundations, caves, scattered stones. Arab graves to the east (Conder 1889: 138); Musil 1907: 217 (no info); Inspected in 1974. Pottery: IA; Erom; Byz, Ayy-Mam (Ibach 1987: 26 n. 115).

#### **MAD\_0037. Manja.**

MEGA-J: 11559

Pottery scatter; arches, caves, tombs. Modern village, cemeteries

Ruins visible all around a small modern core in German aerial photo of 1918 (APAAME\_19180911\_BKA-1199\_DLRK304-2909). Modern village quite extensive already in HAS, with ruins mostly to the S and SE (AZ after HAS); Ancient remains in two cemeteries, notably arches, caves. Recently looted tombs (Ibach 1987: 26). Extensively built over and cultivated before Nov 2003 (GE). Nearly nothing of value is visible in APAAME imagery from 2010 and 2014, except for the extent of overbuilding: APAAME\_20141013\_RHB-0340-1; MND-0570-3; 20100519\_DLK-0018-22; RHB-0028-9; SES-0018, 0020).

Scatter; modern village, cemetery, unsp. period inscription. No bibliography (JADIS 2312.003); Pottery: IA I; E Rom; Ayy-Mam (Ibach 1987: 26, no. 114); Mosaics in the houses of the village, which are themselves built with spolia (Piccirillo 1989: 268); Musil 1907: 106; 216 (No info).

#### **MAD\_0038. Kh. Hawarah.**

MEGA-J: 12402.

Early- to mid-20th c. village with Byz. moulded blocks in reuse.

HAS: Rather large modern village above the ruins

GE: Early-20th village was abandoned at some point and is still in excellent condition in Apr 2013, surrounded by orchards, modern housing and a large cemetery to the S.

AAJ: Condition still excellent in Oct 2014: APAAME\_20141013\_RHB-0357-8; REB-0412; MND-0587-8. Other AAJ imagery: APAAME\_20100516\_DLK-0044-6; DLK-0099-113; FFR-0032-34; RHB-0044-45; RHB-0149-159; SES-0048-56; 20100519\_SES-0038-39; 20141013\_MND-0587-588.





The site is a small 'Ruinenfeld', currently inhabited during the crop season by some *fellahin*. It could become a prosperous village in the future (Musil 1907: 106); Few modern houses, some Byz mouldings in re-use (Glueck 1933-4: 7-8 (no. 60)).

#### **MAD\_0039. Khirbet Yusra.**

MEGA-J:5694

Village (Medieval); one ruined Ottoman house; vaulted cisterns; cemetery

HAS: Several wall lines and Ottoman house, already roofless

AAJ: very good condition in 2013, except for some apparent masonry robbing and destruction, with heaps of recently broken blocks located to the S of the site (perhaps to make lime?): APAAME\_20130413\_RHB-0195 to 201; DLK-0201 to 212; MND-0326 to 0333.

El Yiserah. A ruined village, possibly Eusebian Jessa. Rock-cut cistern to the north and rude vaults and arches [these are certainly of the Ottoman house already in ruins in HAS] (Conder 1889: 279-80) El Jusra. No further info (Musil 1907: 267; 274); Site only noted on JADIS from K737 maps (JADIS 2212.015). Site is very clustered on a low mound, with an Ottoman, arched house to the S and a cluster of small rooms in much worse-off state of preservation. Walls are mostly double parament, with a section of wall running along the lower western slope of the mound being double parament with rubble packing. The entire structure could have been a monastery, but also probably a fortified settlement of Medieval date. A series of vaulted cisterns are visible along the E slopes, where is also located a Muslim cemetery (AZ after AAJ)

#### **MAD\_0040. Et-Teim.**

MEGA-J: 11193, 58998

Large site on two low mounds with several wall lines and cisterns.

HAS: Entrance to several caves/cisterns visible, but no walls or modern buildings.

GE: most of the E mound is obliterated by buildings and orchards by Nov 2003 while the W mound is still relatively clear of building (only one house built between Jun 2006 and May 2008).

AAJ imagery: APAAME\_20130414\_DLK-0320-1, MND-0463, RHB-0283-4.

Burkhardt (1822: 367) puts it 30 minutes west of Madaba, but the site is due south of Madaba as correctly said by Musil (1907: 125 - no other info); Large ruin on two sides of flat valley, Byzantine town with walls, caves, cisterns, remains of rough masonry and cairns (Conder 1889: 228). Pottery: mostly IA I, but also some MB and a lot of Nab and E.Rom (Glueck 1933-4: 33 (no. 79)).

#### **MAD\_0041. Kefeir Abu Sarbut / Khattabiyah.**

MEGA-J: 5691

Village; cistern; church; inscriptions

HAS: Visible.

GE: extensively built over by Nov 2003

AAJ: APAAME\_20130414\_RHB-0189 to 0190; DLK-0192; MND-0306; 0308-9.

Ruined village with square fort and a building with vaults and an open court at the centre of which stood a pillar which gives the name to the village (Conder 1889: 134-7); Extensive ruin with a pillar and a ruined Muslim prayer house (Musil 1907: 216); Excavations by ACOR-DoA in 1972 discovered a three-aisled basilica of John and Elias with two phases of mosaic and two Greek inscriptions (Michel 2001: 363). Another three-aisled church dug in the 1960s - that of the 'Holy fathers' - was partially dismantled and rebuilt in the Madaba resthouse. This also carried another



inscription (Michel, *ibid.*; Piccirillo 1989: 311-3). An Islamic dwelling quarter reusing earlier architecture and a large cistern were also found (Ibrahim 1972: 95). Michel 2001: 363-5.

**MAD\_0042. Kefeir Abu Sarbut / Mosque.**

MEGA-J: 3034

Mosque

AAJ: Has been restored and walled off as visible in APAAME\_20130414\_MND-0307; MND-0310.

Muslim prayer house (Musil 1907: 216). Mosque with well preserved mirhab (AZ after AAJ). Protected site.

**MAD\_0043. Mureijmat el-Gharbiyah/M. Ibn Hamid.**

MEGA-J:11174.

Ruins, cisterns (Glueck); Winery (MEGAJ)

HAS: Modern settlement already atop the site.

GE: The early 20th century houses around the pin have been obliterated by a building under construction in Dec 2004, and finished by Feb 2010. The building has also walled off an earlier cemetery to its S

AAJ: Elliptical field to the W of centre point already visible in HAS survives through Oct 2014 (APAAME\_20141013\_MND-0287). A rock-cut wine press is visible to the W of this building, flanked to its S by a wall line. Further west, west of the elliptical enclosure/animal shelter is the entrance to a tomb (APAAME\_2014013\_REB-0244). Other APAAME: 2014013\_MND-0283-8; RHB-0173-4; REB-0245-6.

Name Mureijmat means the 'place of the little cairn' (Conder 1889: 194, referring to a placename slightly further SE); Musil 1907: 234-5 (no info); 'Featureless ruins and abandoned cisterns' (Glueck 1933-4: 33 (78)). The site includes at least one multi-compartment winery, a possible reservoir and a cistern as well as a rock-cut tomb whose entrance is visible W of the elliptical enclosure (AZ after AAJ).

**MAD\_0044. Satiha / Setihah.**

MEGA-J: 11178

Cisterns, rectangular building, caves

HAS: Clustered mass visible, with no modern building.

GE: most of the site remains free from modern construction, but a farm was established prior to Nov 2003 and olive orchards are creeping along the W slopes.

AAJ: APAAME\_2014\_MND-0290-4, 0296 and 0298; REB-0247 to 0250; RHB-0175-6.

A few ruins of rough walls with a cistern' (Conder 1889: 227); Musil 1907: 126; 395 (only mentions it); Clustered ruin with cisterns and quarry. Pottery: Roman-Early Islamic (Glueck 1937-9: 137 (189)). Small rectangular structure (ca. 8x5 m) located atop a series of natural caves and cisterns (AZ after AAJ).

**MAD\_0045. Kharufa.**

MEGA-J: 11177

Foundations of a Roman building (Glueck); cistern mouths and a modern reservoir probably re-using an ancient one (AZ after HAS and GE).

HAS: Several small mounds visible as are cisterns mouths (?) S of pin.

GE: A house has been built on top of probable ancient wall lines between May 2008 and Dec 2009.



Musil 1907: 126; 395 (only mentions); Pottery: Roman-Medieval (Glueck 1937-9: 137 (190)); Alongside a reservoir (probably ancient and now reused) and a small cutting next to its NW corner, there might be some other ancient wall lines ca. 90 m to the NE of the pin (AZ after GE).

**MAD\_0046. Khirba / Turkmaniyeh.**

MEGA-J:11194

Modern village (MEGA-J).

HAS: A cistern and square structure (possibly modern) are visible

GE: Cistern still visible in Nov 2003, but consequently (Jun 2006 onwards) obliterated by modern housing.

Matat al Terkomaniyeh. Place of Muslim worship of the footprint of a Turkmen lady saint, with small cairns located nearby to mark off the worship point. (Conder 1889: 190-1); Musil 1907: 274 (mentioned in passing); JADIS record likely derived from K737 map reference as is listed with 'no info'.

**MAD\_0047. Kefeir.**

MEGA-J: 11189

Unknown

No site visible in HAS or later imagery.

Very likely a spurious site: JADIS says 'approximate location'. Contains a Greek inscription and is classed as Byzantine (MEGA-J; JADIS). Site is probably a double of Kefir abu Khinan/Wusta which is also called in the 1956 25k maps Khirbat al Kufeir. Site should be deleted

**MAD\_0048. Dhahret Khau.**

MEGA-J: 11185

Unknown.

No site visible in HAS or later imagery.

Ridge of caves W of Madaba (Conder 1889: 97, who is the only one to provide this toponym). However the site is placed to the N of Madaba, and is likely misplaced. JADIS entry references LaBianca 1987: 210 no. 229 which could not be sourced despite contacting the author.

**MAD\_0049. Herbej.**

MEGA-J: 11176

Foundations of large building (Glueck). Farm (AZ).

HAS: A rectangular NW-SE oriented building is visible in HAS.

GE: Additional square rooms, possibly a multi-compartment wine press, are visible in GE imagery (Nov 2003- Jan 2014). Still in good state, though construction of new houses has continued all through the imagery. At date of latest GE imagery (Jan 2014) three major houses are located to the W of the site.

Musil 1907: 106 (no info, and misplaced - see JOR\_3153-02-000010); Pottery: Roman (Glueck 1937-9: 137 (no. 192)). Site has been shifted. The El Herbej in DAAHL is also misplaced.

**MAD\_0050. Jalul / Village.**

MEGA-J: 59169 (Component of MEGA-J: 2692; also likely 14961, 14962, 14972, 14973, 14974, 14980, 14983 but these references are not georeferenced in MEGA-J).

Village (Iron, Byz., Isl., Ott., Modern).



HAS: Visible, along with modern village superimposed to its western sector.

GE: Site still in generally good condition (Apr 2013, GE), though some looting pits have appeared between the ancient houses in the 2000s (prior to first available imagery in GE, dated Nov 2003). Gravel roads have also substituted the previous beaten earth paths before Nov 2004.

AAJ: APAAME\_20091022\_SES-0076.

Byzantine and Medieval Islamic village to the S and SE of the Tell, partly obliterated by modern village (Glueck 1933-4: 5 (no. 50)); Imposing architecture including walls standing above the level of the lintel and arches (Ibach 1987: 13 no. 26). Excavations began in 2008 (Clark et al. 2011: 63).

#### **MAD\_0051. Hanina.**

MEGA-J: 11188

Village ruins, cisterns, necropolis (?), winery (?)

HAS: Visible.

GE: heavily built over already in Nov 2003 (GE), but area immediately around pin - containing probably a press - is obliterated by a house built between May 2008 and Dec 2009 (GE).

Hanina means 'the cistern'. Conder notes many cisterns, some of which bell-shaped, and interprets this as a ruined village (Conder 1889: 103); 'abzweigen (Höhe 746 m), der in nördlicher Richtung zu dem Hügel Hanina, wo sich die Nekropolis von Madaba befindet' (Musil 1907: 215). Very small site comprising an elaborate tomb of 8.75 x 7.3 m with 36+loculi excavated by the DoA prior to 1974 (Ibach 1987: 26 n.116; plates 142-3). A possible wine press is visible in GE imagery (AZ).

The NE limits of this site, currently under modern housing, will be crossed by the ring road. Excavation is recommended considering that Musil regarded this as the site of the necropolis of Madaba.

#### **MAD\_0052. Madaba /The Hippolitus Hall.**

MEGA-J: 17501

Residence (6<sup>th</sup> c.)

Protected site, part of the Archaeological Park. Bikai & Dailey 1996: 30-1, plan no. 8; Piccirillo 1982.

#### **MAD\_0053. Madaba / East Gate.**

No MEGA-J entry for site.

City gate with twin towers

HAS: Ruins of the two towers still visible, but completely obliterated ahead of 1993 under modern buildings (Bikai & Dailey).

Bikai & Dailey 1996: 36, plan no. 15; Manfredi 1899: 150-1 (mentioning the fact that it had been dismantled to build the orthodox church of St George/Madaba map church); Conder 1889: 181.

#### **MAD\_0054. Madaba / Mis'ad al Twal mosaic**

No MEGA-J entry for site.

Residence?

Protected site, in situ inside Madaba Museum. Bikai & Dailey 1996: 41, plan no. 22; Piccirillo 1989: 134-6.

#### **MAD\_0055. Madaba / Farid al Masri mosaic**

No MEGA-J entry for site.

Residence?



Protected site, in situ inside Madaba Museum. Bikai & Dailey 1996: 40-1, plan no. 20; Piccirillo 1989: 132-3.

**MAD\_0056. Madaba / Twal Family mosaic**

No MEGA-J entry for site.

Chapel

Protected site, in situ inside Madaba Museum. Bikai & Dailey 1996: 41. plan no. 21.

**MAD\_0057. Madaba / Shops.**

No MEGA-J entry for site.

Barrel-vaulted shops (Byz)

Unknown status, possibly protected. Row of barrel-vaulted shops discovered in 1980. Some of these shops had mosaic floors, mostly geometric, but one also containing animals (Bikai & Dailey 1996: 36. plan no. 17; ; Piccirillo 1989: 140-1.

**MAD\_0058. Kefeir Abu Sarbut / Winery**

No MEGA-J entry for site.

Winery

HAS: Not visible.

GE: Excavated before Nov 2003, probably as part of the laying out works for the road that runs to its east. AAJ:

Clearly visible in APAAME\_20130414\_DLK-0195; MND-0314-5; RHB-0191.

The site was clearly excavated in some fashion. It is a 5+ compartment winery, with mortice block (For a direct-screw press) moved out of its resting place in the centre of the main treading floor (AZ after AAJ).

Fencing is highly recommended for this site which is at risk of looting as well as endangered by nearby field and houses.

**MAD\_0059. Afnan.**

No MEGA-J entry for site.

Ruins

Undefined ruins on limestone spur. Still completely clear of buildings in HAS; mostly built over by Nov 2003, no evidence of ancient structures, but a looting pit appears on the spur in Feb 2010 (GE). Musil 1907: 334 (only mentions it).

**MAD\_0060. Al-Kreyk/Kereik**

No MEGA-J entry for site.

Farmstead, with quarry and wall lines visible.

HAS: Barely visible.

GE: Imagery (Nov 2003 - May 2013) shows looting, possibly related to nearby modern farm to the S (built before Nov 2003).

The name means 'fortress'. Site consists of walls, cisterns, rock-cut tomb (Conder 1889: 142); Musil 1907: 266 (no info). Site is ca. 60 m long and 30 m wide, oriented NW-SE. Its position at the edge of a limestone ridge with a commanding view to the W and SW over Ma'in - as well as its name - may suggest a defensive purpose, but nothing in the imagery upholds this.

Site has been subject to looting, possibly by the inhabitants of the nearby farm located immediately to the S of the site. Urgent survey is needed.

**MAD\_0061.**

No MEGA-J entry for site.  
Milestone.

Position is conjectural and based on the only mention of this milestone in the 1918 German 1:50,000 Palestine map 81. Mādeba Sheet. This could have been either the 3rd or 4th mile from Madaba: see Borstad 2000: 78; Germer-Durand 1897: 588; Brünnow and von Domaszewski 1904; Smith 1905: 47-8.

**MAD\_0062.**

No MEGA-J entry for site.  
Reservoir/Cistern?

HAS: Not visible.

GE: Clearly visible (Nov 2003- Jan 2014). A depression on ashy soil is visible since Nov 2003, flanked to the SE by what is probably a cistern mouth. Soil clearance in the area in 2008-2009 may have destroyed most of the site. Significant disturbance took place between May 2008 and Dec 2009, with soil clearance around the main site.

**MAD\_0063.**

No MEGA-J entry for site.  
Enclosure or Square Building

HAS: Not visible.

GE: It appears clearly, underneath an olive orchard, in Feb 2010 GE imagery, and is visible in Dec 2012 and Feb 2013 imagery.

RSAME Survey notes for site C565 (David L. Kennedy). DLK's enclosures are not immediately visible on GE imagery, but the foundations of a square building are likely hidden underneath the centre of an olive orchard. A round depression to the NE of this building, just out of the limits of the orchard, may be a reservoir.

**MAD\_0064.**

No MEGA-J entry for site.  
Collapsed cistern/cave?

Feature could be natural only - a collapsed doline. Site visible in HAS as well as through GE imagery (Nov 2003 to Jan 2014).

**MAD\_0065.**

No MEGA-J entry for site.  
Collapsed cistern/cave?

Feature could be natural only - a collapsed doline. Site visible in HAS as well as through GE imagery (Nov 2003 to Jan 2014).

**MAD\_0066.**

No MEGA-J entry for site.  
Walled site with central reservoir and traces of wall lines

HAS: faintly visible.

GE: Very clear on GE imagery (esp. Feb 2010). A small modern building is located at the W extremities of the site since before Nov 2003. Between Feb and Apr 2013, an animal shelter has been built to the SW of the site. GE imagery: Nov 2003-Apr 2013.



Site should be investigated ahead of further building and plowing in the area.

**MAD\_0067.**

No MEGA-J entry for site.

Winery, quarry ?

HAS: Visible.

GE: Visible, esp. Feb 2010. Still in fine condition in May 2013.

The site appears like a rock-cut simple winery with square treading floor and possibly two receiving vats (see GE imagery Feb 2010). The 12 m long, NW-SE oriented cut just to the south of the winery may be a quarry.

No imminent threats.

**MAD\_0068.**

No MEGA-J entry for site.

Cave (natural?)

HAS: visible.

GE: Still in fine condition in May 2013.

No imminent threats

**MAD\_0069.**

No MEGA-J entry for site.

Rectilinear building with retaining walls.

HAS: perfectly visible.

GE: Completely obliterated before Nov 2003 to make space for terracing and a poultry farm

The site may have been a small farm, with retaining walls along the edge of the wadi.

**MAD\_0070.**

No MEGA-J entry for site.

Enclosure

HAS: Visible.

GE: Completely disappeared before Nov 2003.

Enclosure of unknown purpose.

**MAD\_0071.**

No MEGA-J entry for site.

Ruin

Visible in HAS, but completely vanished underneath modern housing prior to Nov 2003.

**MAD\_0072.**

No MEGA-J entry for site.

Cistern?





Faintly visible in HAS, it appears clearly on GE imagery (from Nov 2003 to May 2013), esp. on imagery from Feb 2010.

**MAD\_0073.**

No MEGA-J entry for site.  
Reservoir (modern?)

Only faintly visible in HAS, but clear in GE imagery (Nov 2003 - May 2013). The reservoir could possibly be modern.

**MAD\_0074.**

No MEGA-J entry for site.  
Caves (natural?)

HAS: Visible.

GE: Visible from Nov 2003 to May 2013. Olive orchards and a house (a second one was added between Sep 2008 and Dec 2009), further expansion of orchards likely.

These could be collapsed dolines and be completely natural.

**MAD\_0075.**

No MEGA-J entry for site.  
Enclosure?

HAS: Visible.

GE: completely vanished under modern housing before Nov 2003

The location is conjectural and based on location in HAS (HAS 8.044 – 03/07/1953).

**MAD\_0076.**

No MEGA-J entry for site.  
Rectangular building?

GE: Only visible in Feb 2013 GE imagery.

Site could be modern. It is located just east of the bridge on the wadi al-Habis, oriented ca. WNW-ESE and ca. 7\* 6 m. A faint structure is only just visible in HAS, but located slightly to the W of this site, within the same wadi loop.

**MAD\_0077.**

No MEGA-J entry for site.  
Ridge of caves/tombs (?)

HAS: Visible - completely free of occupation

GE: Top of the ridge occupied by a house and orchard before Nov 2003 (GE). More houses added from 2004 onwards (one in construction in Nov 2004) with massive land leveling going on in Feb 2010, when two more houses on the eastern slope. Several more houses built between Feb 2010 - May 2013 (GE).

This ridge is full of cave entrances. Some enclosures, possibly modern, were visible in HAS imagery. Some of the caves could be collapsed rock-cut tomb entrances.

Inspection recommended owing to intensity of urbanisation in this sector.

**MAD\_0078.**

No MEGA-J entry for site.



Necropolis?

HAS: Systematic disturbance visible in HAS (HAS-8-044-6 (03/07/1953); 24.125 (15/07/1953)).

GE: Entire area is densely built over already in Nov 2003 (GE).

This limestone spur is immediately out of what would have been the walled perimeter of Madaba, to the SW of its main reservoir. The site has been used since the early 1950s as a refugee camp for Nakbah Palestinians - disturbance could be related to construction work.

**MAD\_0079.**

No MEGA-J entry for site.

Square enclosure/building

Visible in HAS (8.044 (03/07/1953), 24.127 (15/07/1953)), but completely vanished under modern buildings prior to Nov 2003 (GE). Location is conjectural based on HAS.

**MAD\_0080.**

No MEGA-J entry for site.

Enclosures/wall lines.

Several wall lines are visible in HAS image 24.127 only (15/07/1953). Completely disappeared under modern building prior to Nov 2003 (GE). Location is conjectural based on HAS.

**MAD\_0081.**

No MEGA-J entry for site.

Square reservoir/quarry, caves.

HAS: Visible.

GE: S still completely free of construction in Feb 2010, but building of a probably military installation was fully underway in May 2013 and complete by Jan 2014 (GE). The fence of this compound runs around the site in question, but does not encompass it.

Site is located at the top of a low limestone spur. It could be a reservoir. Evidence of stone-cutting/quarrying is also present ca. 80 m further NW of this site.

**MAD\_0082.**

No MEGA-J entry for site.

Cairn?

HAS: Only faintly visible.

GE: Visible through coverage (Nov 2003-May 2013).

Debris, seemingly from a crumbling round central core seems to be visible. Site could be spurious.

**MAD\_0083.**

No MEGA-J entry for site.

Enclosures.

HAS: Visible.



GE: Already built over with a house and olive orchards in Nov 2003 with further house building in the S starting before Dec 2004.

Site could possibly have housed an ancient farm, now nearly completely obliterated by modern houses and orchards.

**MAD\_0084. Kirbet Jedeid.**

No MEGA-J entry for site.

Tower/Fort.

Ancient fort ... square block-house ... closely-built buttresses ... solid masonry (Tristram 1887: 337). Position is conjectural.

AAJ Project appears to have estimated a pin location for the following passage: "At the head of the valley stands an ancient fort, Kirbet Jedeid, which would call for no remark, being exactly like all the others, a mere square block-house, were it not that it was the only one we found in which the walls are still tolerably perfect, and show the closely-built buttresses which strengthened the solid masonry." Nothing is in this location however. This passage could be interpreted as at the head of the Wadi Jedeid or Ain Jedeid Valleys in which case the site Tristram is implying may well be Rujm Mukhayat MEGA-J:58773 (MAD\_0091); or Al fehaa / Rujm Ghuweinim MEGA-J:59331 (MAD\_0107). No other early traveller mentions a site by this name.

**MAD\_0085.**

No MEGA-J entry for site.

Quarrying, Cistern, Birket?

Limestone outcrop with clear cuts caused by quarrying. Two square cuts may have been reused as Birket. One circular opening may be a cistern, another modern cistern lid visible insider section of outcrop fenced off for olive farm. South east edge of outcrop where it meets plain has pitting evident, cause not certain.

AAJ Project: APAAME\_20130414\_DLK-0213; MND-0337; RHB-0202, 03.

GE - Northwest third of site overlain by modern olive farm and fenced off. Square cuttings evident. Pitting on SE edge of outcrop visible best on imagery dated 20/02/2010.

HAS 14.041-2, 24.127-8 - imagery not clear enough to discern structures.

**MAD\_0086.**

No MEGA-J entry for site.

Field walls, Enclosure, Birket?

Field walls on limestone slope of southern edge of mount Nebo plain. An irregular enclosure can be seen at the intersect of two field walls, a covered birket or cistern evident at end of wall to NNE of enclosure. Another is possibly to the SE of the first. Structures are in an advanced state of ruin.

AAJ Project: APAAME\_20130414\_MND-0334, 35, 36 - field walls and enclosure, edge of imagery shows two possible small birket, one of which is covered.

GE Digital Globe 20/02/2010 clearest imagery for visualising site but features are not very clear due to advanced state of decay.

HAS 24.127-128 - structures not clearly evident.

**MAD\_0087.**

No MEGA-J entry for site.

Enclosure.



c. 43 m. radius circular enclosure. Visible on 1918, HAS and satellite imagery. No internal structures evident. Enclosing wall is in an increasing state of rubble and low level oblique imagery from AAJ indicates area inside is being used for agriculture. Resembles 'Conder's Circle' [MAD\_0100] in structure and size. A cistern may have been placed in center of site – the cover of which is partially visible on low level imagery.

German 1918 Photographs: APAAME\_19180911\_BKA-1171\_DLRK304-2888.

AAJ Project: APAAME\_20060910\_FFR-0096; 20130414\_DLK-0239-45; MND-0369-74; RHB-0229-32 - The passing 2006 imagery implies the wall of the enclosure has suffered serious degradation and appears collapsed almost completely in the 2013 imagery.

HAS: 14.041-2, 24.127-8 - Feature is clearly evident.

GE: site evident, becoming less defined as outer wall collapses. A possible looting pit is on imager from earliest imagery 25/11/2004 DigitalGlobe. A fence appears to interfere with the southern side of the enclosure.

Site may be included in the Mount Nebo Archaeological Survey but relevant volume is not yet published.

#### **MAD\_0088.**

No MEGA-J entry for site.

Farm, Terracing.

A rectilinear structure, c. 10m square, alongside a large walled trapezoid enclosure, c. 100-150m sides, containing the terraces of an olive? farm located on the southern slope facing the source of Ain Jedeideh, in the valley of the Wadi Kunaiyisah.

AAJ Project: APAAME\_20070417\_FFR-0057.

GE: No evident changes to site.

HAS: 14.042-3 - site evident. Rectilinear structure does not appear to be roofed suggesting not in used in 1953.

#### **MAD\_0089.**

No MEGA-J entry for site.

Cairns.

Two collapsed? cairns of fine rubble, one c. 9m radius, the other c. 6m radius, on edge of plain overlooking the Wadi Kunaiyisah to the west.

AAJ Project: APAAME\_20130414\_DLK-0289-90; MND-0426; RHB-0261.

Clearest on GE Digital Globe 20/02/2010.

HAS 14.042-3 - Just visible on imagery.

Cf. Conder (1889: 206) - describes "Rujm el Mekheiyit" as a Cairn directly east of 'Conder's Circle' (MAD\_0100; MEGA-J:58435). He could have been mistakenly referring to these cairns instead of the tower of Rujm al-Mukhayyat to the north of this site (MAD\_0091; MEGA-J:58773).

#### **MAD\_0090.**

No MEGA-J entry for site.

Rectilinear Structure - Farmstead (Modern).

Three roofless building ruins on the southern edge of a farmed wadi bed, with minor terracing on slopes of valley, running west from the edge of the plain.

Clearest on GE Digital Globe 25/11/2004

HAS 14.042 clearest - complex is roofed and likely contemporary to 1953

#### **MAD\_0091. Rujm al-Mukhayyat / Rjm Fadheel.**



MEGA-J: 58773

Tower - Iron Age.

A square tower, c. 20 m., with inner courtyard c. 7m square surrounded by divided rooms on each side. Site appears to have been excavated, with piles of rubble surrounding the site but not in contact with outer walls. A cave or collapsed cistern entrance can be seen in the low level oblique imagery to the south of the site. The site is on a limestone peak looking west towards Khirbet Mukhayyat over the valley of the Wadi Afrit. Field walls from north and east, possible circular enclosure to North.

AAJ Project: APAAME\_20060910\_FFR-0088; 20070417\_DLK-0008-9, 133, 135-137, 139-141; FFR-0044-46; RHB-0018-21, 225-227 - extent of tower is clear. Stone used in construction appear to be small and possibly unworked. Walls of structure thick, possibly three-four stones deep.

HAS 14.042-043 - site is not clearly evident pre-excitation. Explains why Conder may have mistaken it for merely a 'Cairn'.

GE - ruin is clear with no obvious damage to site evident.

Benedettucci and Sabelli (1998) - Excavation 1960s - J. Ripamonti University of Caracas but publication never occurred; Glueck 1934-1935: 111; Conder 1889: 206 - Rujm el Mekheiyit – Cairn; Possibly the Kirbet Jedeid mentioned by Tristram (1873: 337) - cf. MAD\_0084 but unlikely considering Conder refers to it resembling a Cairn: "At the head of the valley stands an ancient fort, Kirbet Jedeid, which would call for no remark, being exactly like all the others, a mere square block-house, were it not that it was the only one we found in which the walls are still tolerably perfect, and show the closely-built buttresses which strengthened the solid masonry."

#### **MAD\_0092.**

No MEGA-J entry for site.

Rectilinear Structures - Farmstead (Modern).

A complex ruined building on the northern edge of the Wadi Kunaiyisa in the section fed by Ain Jedeideh, possibly adapting or overlying, or alongside, a slightly older structure. Field walls and enclosures can be seen up the slope in the site's vicinity. This section of the Wadi Kunaiyisa is particularly fertile due to Ain Jedeideh. Concentration of farming structures in valley do not seem commented upon by historical surveys however.

AAJ Project: APAAME\_20060910\_FFR-0078.

GE - new road on CNES/Astrium 24/05/2013 imagery cut close to NE edge of site.

HAS 14.042-043 - Structure is roofed suggesting contemporary 1953 function (as with site directly opposite across Wadi).

#### **MAD\_0093. Khirbet al-Mukhayat (Town of Mount Nebo).**

MEGA-J:11184

Settlement - ancient; Settlement - monastic.

A concentration of ruins from a walled settlement along a ridge jutting south from the Mount Nebo plain isolated on the west, east and southern sides by the steep valleys of the Wadi Afrit (on the south and east) and the Wadi Mukhayyat (on the west). Traces of ruins can be seen across the surface of the site, two being exposed excavations of church complexes on the southern (Church of St George MAD\_0096) and eastern (Church of Amos and Casiseos, and Chapel of Priest John MAD\_0094) sections of the site. Farming has existed on the site since at least Ottoman era. Old fieldwalls are evident to the eastern side of the site, while modern groves extend over the western side. One of the Ottoman buildings was built over a church (Church of the Holy Martyrs Lot and Procopius MAD\_0095), which has been excavated and continues to be protected by the Ottoman structure. A cavern, partially collapsed, is evident in the centre of the site. Low level oblique imagery has captured what appears to be a structure on the southern extent of the site (MAD\_0097) and caves, cisterns or tombs on the eastern slope of the site facing the Wadi Afrit.



German 1918 Photographs: APAAME\_19180911\_BKA-1172\_DLRK304-2887, BKA-1171\_DLRK304-2888 - the ruiend site is unfortunately only visible at edges of these images. Farming concentrated on eastern slope at this point in time.

AAJ Project: APAAME\_20060910\_DLK-0017-23, 172-179; FFR-0089-92, 94-95, 97; RHB-0038-40, 107-111; APAAME\_20130414\_DLK-0217-20, 23-24, 26-28, 30, 33-34, 37-38; MND-0340-48, 50-52, 56-58, 64-66, 68; RHB-0206-214, 16, 19-20, 22-25, 27, 28; HAS 14.041-2, 24.127-128 show existing Ottoman structures and field walls concentrated to easter slope of site, implies no expansion of structures over site since 1953; GE - no expansion of agriculture or access roads evident in imagery 2004-2014 - it is evident that only a portion of the site is fenced off, only Church of the Holy Martyrs Lot and Procopius is protected, other two church excavations remain exposed.

Saller and Bagatti 1982; Lemaire 1934; Piccirillo 1973; Tristram 1873: 337 - M`Heiyat; Glueck 1934-1935: 110 (239) - Kh. Mekhayyet; Musil 1907: 335f. - Ħirbet el-Mħajjet; Conder 1889: 191 - el Mekheiyit; Jausen & Savignac 1909: 18-20; Piccirillo 1998a; Graham & Harrison 2000; Michel 2001: 339-353.

#### **MAD\_0094. Church of Amos and Casiseos and Chapel of Priest John.**

MEGA-J:58465

Church - Byzantine.

See Piccirillo plan.

AAJ Project: APAAME\_20130414\_DLK-0217-220, 223-224, 226-227; MND-0340-342, 344-348, 350-351; RHB-0206-209, 212, 214.

HAS - Ruins clearly evident in location but definition not clear.

GE- site excavation evident - appears no efforts have been made to protect or rebury excavation

Piccirillo 1988; Piccirillo 1998a: 223-229; Michel 2001: 348-353.

#### **MAD\_0095. Church of the Holy Martyrs Lot and Procopius.**

MEGA-J:50033

Church - Byzantine.

See Piccirillo plan.

Covered by Ottoman building - cannot be photographed from air - i.e. APAAME\_20130414\_MND-0343.

Piccirillo 1998a: 229-231; Michel 2001: 345-347.

#### **MAD\_0096. Church of St George.**

MEGA-J:58466

Church - Byzantine.

See Piccirillo plan

AAJ Project: APAAME\_20060910\_DLK-0017, 173, 175, 179; RHB-0109; APAAME\_20130414\_DLK-0233

GE- site excavation evident - appears no efforts have been made to protect or rebury excavation.

Lemaire 1935; Michel 2001: 340-345; Piccirillo 1998a: 231-242.

#### **MAD\_0097.**

No MEGA-J entry for site

Rectilinear Structure.



Sections of substantial rectilinear walls at southern end of Mukhayyat visible in low level oblique imagery. The structures are outside of fenced area of the site. Pin location approximate, may be located further north than indicated.

APAAME\_20130414\_DLK-0230; MND-0356-57; RHB-0216.

Site not evident on GE or HAS.

**MAD\_0098.**

No MEGA-J entry for site.

Cavern.

Two large openings in the surface of the Mukhayyat site, located roughly in the middle of the site extent. May be from collapsed caves - no lining of the structures is evident to suggest they were used for water retention. Within area of site being farmed.

APAAME\_20130414\_DLK-0234

Site evident on GE and HAS 14.041-2.

**MAD\_0099.**

No MEGA-J entry for site.

Caves, Tombs?, Cistern.

The steep eastern edge of the site leading down to the Wadi Afrit containing clear cave entrances that may contain tombs and/or cisterns. At least one cistern with collapsed roof and intact lining is evident on low level aerial photograph, along with 12 other entrances in rock face that could be potential other cisterns and/or tombs.

APAAME\_20130414\_MND-0349.

This type of site is not visible on vertical imagery - only on low level oblique.

**MAD\_0100. Conder's Circle (Hadanieh/Ain Jedeideh).**

MEGA-J:58435

Fortified site - Late Chalcolithic/EBI.

**MEGA-J** gives the name Ain Jedeideh, technically that of the spring below the site, but the polygon extent is of the large enclosure only with no further information. The site is a prominent large circular enclosure appearing as c. 38 m radius on a level platform in the steep sided valley above 'Ain Jedeideh. Excavations at the site have revealed an enclosed platform of c. 45m diameter surrounded by a broad rampart of 25-30 m wide standing c. 3-8 m high in places above the slightly sloping bedrock. Excavations have revealed within the enclosure a large central building with a central hall of c. 8.5 x 4.5 m. The visible excavations also show a circular structure. By the 2013 imagery the excavations have been covered over and the outer circle returns to being the most prominent feature on the site. A later? square structure can be seen on the outer edge of the circular wall c. 8m. The excavators date the site to the Late Chalcolithic/Early Bronze Age.

AAJ Project: APAAME\_20060910\_DLK-0010-15, 161-71; FFR-0079-84, 86-87; RHB-0032-37, 41, 104-6; 20070417\_DLK-0011-15, 129, 143-53; FFR-0048-56; RHB-0022-26, 228-37; 20130414\_DLK-0283-87; MND-0418-19, 421-25; RHB-0258-60 - Excavations clear in 2006 and 2007 imagery, 2013 sees the excavation covered over.

HAS: 14.042-043 - site details are not clear but the circular extent is evident.

GE imagery not fantastic except for 25/11/2004 imagery, but imply excavations were exposed until at least c. 2009.

Note: a report states that the landowner was interested in leveling the site so the natural platform could be used for a new house. This does not seem to have eventuated yet (Mortensen & Thuesen 2000).





Conder 1889: 98- "Hadānieh" - documents two enclosures, a cave and the spring Ain Jedeideh below. Note drawing between pages 100 and 101; Musil 1907: 3, 270 - el-Hadānīje refers to the slope with profuse dolmen; 267 - a fortified place SE of "Ajn Gdejd" may refer to the circle.

Mortensen 2000; 2005; Mortensen & Thuesen 2000; 2007; **Thuesen** 2009.

Final results of Mount Nebo Archaeological Survey that included this structure only begun to be published in 2013 with Mortensen et al 2013. As this structure is determined as EB I it is likely to appear in a later volume.

#### **MAD\_0101. al-Kanisah.**

No MEGA-J entry for site.

Monastic complex.

Monastic structure on the southern slope of the Wadi Afrit Valley, almost at the Wadi's beginning, facing North. The complex comprises of three major sections along a length of c. 23m. in the direction of the slope of the ground, c. 12m at its widest point at the southern, highest end where the chapel (c. 12 x 9 m) is located. Site is excavated and remains exposed and visible on satellite imagery. For further information see plan and description published in Piccirillo. Dated to the 6th-8th century.

GE - excavation extent clear from imagery, no protection evident and site does not appear to have been covered over after excavation. An access road to the site becomes increasingly used between 14/06/2006 to 24/05/2008, the installation of terracing walls presumably extending the farm to the east further down the wadi to the west towards the complex also occurs during this period, therefore potential damage to site has significantly increased. 14.041-2; 24.126-8 - Site not apparent in imagery

Site first investigated by J. Ripamont (University of Caracas) but not publication resulted. Piccirillo 1998b: 205-209; Homès-Fredericq & Hennessy 1989b: 378 - Monastery of the Wadi Afrit; Michel 2001: 351-53 - al-Kanisah.

#### **MAD\_0102. Ed-Dair / Ma'in / Ba'almeon.**

MEGA-J:10262; 10242 (latter very much mislocated)

Settlement - Modern; Ancient.

Large occupation mound on limestone outcrop c. 235 m in diameter is the location of the Ancient settlement, and the core of the Ottoman settlement. A saddle and small valley separates it from a smaller limestone ridge to the west. The valley is reported to have once held the settlement's water catchment area, possibly a Birket (Conder). 1953 imagery shows development has spread to the western ridge. Modern development has concentrated to the western ridge and to a northern limestone knoll 500m away, and has spread somewhat into the 'old town' where many ruined structures possibly dating back to the Ottoman period can clearly be seen in the satellite imagery. Three churches are reported in association with this site but only one is indicated in the MEGA-Jordan record: the western church, the citadel church, and the monastery church. The West Church can be seen in the satellite imagery and low level obliques by AAJ as an exposed excavation. It is cut by a modern road.

GE: Site is clearly one of continual occupation with the more modern incarnations of the site building into the older, though possibly due to the extensive Ottoman ruins still in existence, it appears modern development is being concentrated to the knolls surrounding the more ancient sections of the site, most concentrated immediately west.

AAJ Project: APAAME\_20130414\_DLK-0322-37; MND-0469-87; RHB-0286-301.

HAS 14.044-6 - extent of village (Ottoman buildings?) clearly evident concentrated on eastern (ancient) site. White shadows across limestone outcrops in site's vicinity suggest extensive quarrying in region, especially on mound directly to North, and this is supported by the K737 English map: 3153 III Sheet. Some of the more immediate knolls may have been used for ancient cemeteries but this is not able to be confirmed in the imagery.



Seetzen 1854 : 408 – Ma'în; Irby & Mangles 1844: 143-144 – Mayn; Musil 1907: 397-99 Fig 190 - Ĥirbe Mâ'în; Glueck 1934: 33 (site 83) - Mâ'în - a large mound with a large modern village on its summit. Byzantine & Arabic sherds; Conder 1889: 176-77 - Baal Meon / Mâ'în - Ruins are extensive covering the whole Tell and extending over the lower ground to the west. Head of the valley from the west side of the tell is occupied by a large birkeh. Roman or Byzantine period houses, vaults of good masonry beneath houses. Ancient Roads lead to the city from west and north. Arab graveyard on the top of the Tell towards the east; Tristram 1865: 540 - Ma'în - ruins situated on a mamelon like Heshbon, shapeless and featureless; Tristram 1873: 316-17 - Ma'în (Baal-meon) - ruins occupy the crests and slopes of four adjacent hills, one evidently the central city; Jausen & Savignac 1909: 6-8, 298-300 - Mâ'în; Meistermann 1909: 294; Van Elderen 1973:84 - the remaining section of mosaic floor and Church excavated near the main intersection in Ma'în. Most of the structure appeared to have been destroyed previous to discovery in the building of a house; Piccirillo 1982: 508-510; Khammash 1986: 41-48 - regarding modern village, but mentions incorporation of ancient features; Michel 2001: 367-373 - Ma'în's 3 churches - the Monastery church, the Acropolis church and the West church. Only the west church has been listed here due to the uncertainty of the location of the other remains.

Kh. El-Deir excavation: Piccirillo 1976; Piccirillo & Rassam 1976;

cf. Piccirillo's entry for 'Ma'in' in Homès-Fredericq & Henessy (1989b: 376-77) mentions two further sites in association with Ma'in: 'Ain el-Qattar - Rupestral room in the vicinity of the spring and small monastic centre, with a church and rooms, and 'Ain Minyeh - Byzantine cemetery, graves covered in mosaics.

#### **MAD\_0103. Quweijiya.**

MEGA-J:5695

Settlement - Ancient, Ottoman?, Burials?, Dolmen?, Cistern, Agricultural features.

Ruins situated on a limestone peak removed from the western edge of the plain, at the eastern side of the Wadi Judeid. MEGA-J entry records only modern period remains of a settlement, but low level oblique imagery taken by AAJ project indicates older, possibly ancient, rectilinear ruins on top of peak as well as associated structures such as possible cisterns, tombs, caves and a quarry, some of which appear to be reused. The later modern settlement is lower down the slope to the west. Dolmen are also noted by Musil (1907: 111-114) in association with the site location. A track leaves the plain and passes this site descending towards the Jordan Valley. Some clearance of the peak appears to have occurred which may have damaged some of the structures.

AAJ Project: APAAME\_20130414\_DLK-0291-307; MND-0427-40; RHB-0262-71 - ruins on peak as well as Ottoman? dwellings on slope; caves.

14.042-3 - Ruin at peak unclear but evident. Extent of lower Ottoman? settlement is clear due to appearance of roofs.

GE - road access to peak where ruins located may indicate development imminent, no particular other impacts evident on extent of GE imagery however, though it appears the surface of the peak was cleared to some extent at some point.

Conder 1889: 138 - el Kueijiyeh; Musil 1907: 267 (Fig. 111-114)(?) - ĥ. el-Kwejżije and dolmens; Conder 1889: 264 - Kuweijiyeh 6 feet in diameter erect circular worked stone, like a millstone.

#### **MAD\_0104. Ain Jedeideh / Jedideh / Jadidah.**

cf. MEGA-J:11245 entry for Ain Jedideh indicates a location on the northern side of the wadi, perhaps indicating structures in that vicinity, but it is not the spring itself. Likewise MEGA-J:58435 is named Ain Jedeideh but indicates Conder's Circle.

Spring, Farmsteads, Terracing, Settlement, Dolmen, Stone Circle, Menhir/Standing Stone, Artefact scatter

Cultivated stretch of the Wadi Kunaiyisa due to the presence of spring Ain Jedeideh. Ottoman/Early-mid 20th century farm buildings dispersed on outskirts of fertile farmed area. Modern buildings appear absent, probably



utilising road into area from north rather than settling in valley. Linked to structure MAD\_0100 (MEGA-J:58435) by Conder which is just southeast of the source.

APAAME\_20130414\_DLK-0278-81; MND-0408-13, 15; RHB-250-54.

GE - extent to which water of the spring extends is clearly evident, concentrated on the north bank of the Wadi Kunaiyisah. Road to valley from North upgraded between 09/12/2009 and 24/05/2013 GE imagery.

HAS 14.041-3 in comparison to GE imagery shows agriculture has extended westwards down valley, and shows farmsteads roofs intact suggesting minor settlement in valley contemporary to 1953.

Conder 1889: 9- Ain Jideid; 98f- "Hadānieh" - documents two enclosures, a cave and the spring below p. 100 "Ain el Jideid" mentions a lintel-stone with a cross and supposes a chapel on the hill to the south - see drawing between pages 100 and 101. Also referenced by Piccirillo as in the vicinity of some Arabian dwellings (Homès-Fredericq & Hennessy 1989b: 402); Musil 1907: 17, 266, 267 `Ajn Ġdejd.

The area was included in the Mount Nebo Archaeological Survey (Mortensen et al. 2013). Sections of the site will appear in this study's publications according to the period to which they relate. The current volume reveals artefact scatters from the Palaeolithic-Neolithic periods are concentrated to the Northern slope of the wadi valley. Future publications may contain more sites for the spring area.

#### **MAD\_0105.**

No MEGA-J entry for site.

Dolmen.

Dolmen are notoriously difficult to see in vertical aerial imagery – this location is not representative of the site extent.

GE imagery Digital Globe 25/11/2004 perhaps shows numerous dolmen in this vicinity- apparent due to shadows cast by large rocks which are possibly part of Dolmen.

Not visible on HAS.

Conder 1889: 254-274 - Wady Jideid Dolmens.

Note: Historical travellers Musil (1907: fig. 111 (p. 266), Conder (1889: 254-274) and Jaussen & Savignac (1909:12-17) mention profuse Dolmen in this vicinity and further south towards the Maslubiyeh ridge (cf. Saller & Bagatti 1982: 16-17 - who mention studies by Conder, Schumacher, Dalman, Mader and Karge). Forthcoming volume of the Mount Nebo Archaeological Survey will detail these structures (cf. Mortensen et al. 2013: fig 10, 13, 20-21, 25).

#### **MAD\_0106.**

No entry for this site reference.

#### **MAD\_0107. Al fehāa / Rujm Ghuweinim.**

MEGA-J:59331

Rectilinear Structure - Tower?, Cairn, Enclosure

A collapsed rectilinear structure, possibly a tower c. 30m square, on a peak (835m according to K737 3353.III - Ma'in Sheet) on the ridge that extends west from the Madaba Plain (referred to by Musil as el-Maslubijje) which overlooks the Wadi Judeid and Kunaiyisa valleys to the north and Wadi 'Uyun adh Dhib valley to the south. A collapsed small cairn or Rujm can possibly be seen c. 100m to west on the same peak. An ovoid enclosure (c. 120 x 230 m), possibly a low field wall, encapsulates the two structures. A road passes from the plain to the east just north of the site, descending into the Jordan Valley.

GE: best imagery is Digital Globe 25/11/2004. A modern track can be seen to pass through enclosure but no major impact to structures.

HAS: 14.043-4 - Collapsed rectilinear structure evident as well as possible Rujm to west. Enclosure around structure is also faintly recognisable.



Rujm Ghuweinim - Levant 50k Palestine Grid; Musil 1907: 270 - el-Maslubijje summit with ruins and dolmen.

**MAD\_0108. Ma'in / West Church.**

MEGA-J:45461?

Church.

A three nave basilica church with rooms on the west and southern sides, the west containing the partial remains of mosaic. The structure was in a state of bad preservation when excavated. For more details consult Piccirillo or Michel.

AAJ Project: APAAME\_20130414\_MND-0484

GE: Details just visible in 25/11/2004 and 25/01/2014 imagery.

HAS: 14.044-6 - site does not appear to have been built over at this point, but ruin not visible in image.

Piccirillo & Russan 1976; Michel 2001: 371-373 - église du versant ouest (plan fig. 351 (p. 372)).

**MAD\_0109.**

No MEGA-J entry for site.

Rectilinear Structure - Farmstead?

A ruined building c. 18 x 22 m with internal walls located just west of MAD\_0100 'Conder's Circle'. A low wall connects to site from southeast, and another extends from site to west and appears to end in a small square structure c. 6m. Possible remains of field walls and terracing in vicinity.

GE: Digital Globe 25/11/2004 best to view site - No apparent current impacts to site.

AAJ Project: APAAME\_20070417\_FFR-0058.

HAS: 14.042-43 - poor, but lack of a solid white roof suggests already ruined in 1953 - Ottoman? Date possible.

**MAD\_0110. Um Jureisat/Jereisat.**

No MEGA-J entry for site.

Settlement - Ottoman/Modern?

Group of 6 or so buildings, some ruined, on a minor ridge on what Musil refers to as el-Maslubijje, west of the Madaba Plain. Minor valleys either side of the ridge on which the small settlement is built show evidence of agriculture: wadi valleys ploughed, water catchment walls, possible terracing to west and east. Roofs are in tact in 1953 imagery suggesting a contemporary/earlier date for settlement. The major ridge perpendicular to the south is the target for modern development along the road that extends from the Madaba plain to the east.

GE - Digital Globe 25/11/2004 best to view - small modern buildings also starting to develop onto site.

HAS: 14.042-4. Note: white smudges on landscape to east and west suggest possible local quarrying in vicinity or minor collapsed structures.

Conder 1889: 248 - Umm Jereisat; Musil 1907: 270 - el-Maslubijje summit with ruins and dolmen.

**MAD\_0111. Rujm el Meseik.**

No MEGA-J entry for site.

Cairn, Tomb?

Location of site is conjectural. GE - Modern houses overlie location; HAS - no structures evident

Conder 1889: 206-7 - Rujm el Meseik; Musil 1907: 267 - Rugm el-Msejic - no description given.

"Rudschm el Msek" - German 1:50,000 Maps of Palestine Sheet 81; Musil Map Arabia Petraea "Rugm el-Msejic".

**MAD\_0112. Bir Arad.**

No MEGA-J entry for site.  
Well / Cistern?

Location of site is conjectural. GE - location uncertain. Olive grove in vicinity of possible location. Domestic building begins 24/05/2008; HAS - 14.045 no well evident but the location of a bedouin tent on photograph may indicate that there was a water source nearby.

Conder 1889: 92 - Bir Arad; Musil 1907: 270 - Bir `Arad – Cistern.  
"Bir Arad" - German 1:50,000 Maps of Palestine Sheet 81.

**MAD\_0113. Qasr el Werd?.**

cf. MEGA-J:11190  
Structure, Cistern?

Earliest GE imagery of site shows an irregular enclosure c. 50 x 100 m within which a collapsed structure or Rujm diameter of c. 17 m can be seen on a limestone outcrop. Quarrying of the outcrop is evident on Northern and western sides.

GE - 25/11/2004 best for viewing site. Between 14/06/2006 and 24/05/2008 Digital Globe imagery development on western extent of site occurs; between 09/02/2010 Digital Globe and 24/05/2013 CNES/Astrium a building is built over main part of site, probably destroying it.  
HAS: 14.044-5; 24.123-5 - nothing clearly evident.

Conder 1889: 176 - Kusr el Werd, hills immediately NE of Ma'in; Glueck 1934: 33 (84) - Qasr el-Werd, 2km NE of Ma'in - indeterminate ruins and a large cistern; Meistermann 1909: 293 - Qasr el Ouârd, Castle of the Rose.  
Note: according to Glueck this location is too close to Ma'in, but MEGA-J's location is too far away. Note JADIS entry states its given location is "Approx location and elevation".  
"Kasr el Werd" - German 1:50,000 Maps of Palestine Sheet 81; Musil Map Arabia Petraea "K. el-Ward" but not in text.

**MAD\_0114. K. Nefaich?**

No MEGA-J entry for site.  
Settlement?

Location is conjectural. Possible cluster of ruins evident in HAS imagery on low limestone outcrop east of Ma'in. One section of possible ruin c. 25 x 70 m., another 20 x 35 m., another indeterminate mound of c. 35 m diameter also evident. Road from Ma'in to east runs through southern section of possible site. A wadi passes to North.

GE: site built over with no evident ruins.  
HAS: 14.044-6 - rectilinear? white areas may imply former ruins extent. Otherwise may indicate quarrying.

Conder 1889: 198 - Naifeh, a hilltop  
"Ch. Nefaich" - German 1:50,000 Maps of Palestine Sheet 81; Musil Map Arabia Petraea "Nfajh" but not in text.

**MAD\_0115.**

No MEGA-J entry for site.  
Rectilinear Structure.

A ruined structure c. 7 x 17 m. with possibly one or two internal divisions. A modern dwelling has been erected alongside the site.



GE: most visible on Digital Globe 35/11/2004; 14/06/2006; 24/05/2008.

HAS: site not clear.

**MAD\_0116.**

No MEGA-J entry for site.

Enclosure?.

Circular enclosure with possible internal divisions, c. 10m radius.

GE Digital Globe 25/11/2004 best for viewing site. Site is damaged from construction of a road alongside that is built by 05/12/2009.

HAS 14.042-4 enclosure is evident, but not subdivisions. Limestone outcrop on which it is located seems to possibly be effected by quarrying?

**MAD\_0117.**

No MEGA-J entry for site.

Cisterns?

Two round cistern? openings c. 10m apart on mound at edge of limestone outcrop immediately east of Ma'in.

GE - Digital Globe 25/11/2004; CNES/Atrium 25/01/2014 both good for viewing possible site. Cisterns associated with mounding possibly associated with buried or collapsed ruins.

HAS: 14.044-6 - the low limestone knoll is evident but any trace of other structures not clear.

cf. MAD\_0114 possible site of Kh. Nefaich is immediately to east.

**MAD\_0118.**

No MEGA-J entry for site.

Rectilinear structure – modern, Fieldwalls, Birket, Track/Road.

One modern roofless structure c. 5 x 10 m. One roofless birket/cistern c. 5 x 3 m (now filled with rubbish). Possible cuts visible in limestone outcrop - quarrying on NNW side, possible channels on E and W sides. Minor walls evident possibly remnants of field boundaries - a particularly defined one along W side of outcrop may have been the edge of a track or road, possibly to Kh. Mukhayyat.

AAJ Project: APAAME\_20130414\_DLK-0215-16; MND-0339; RHB-0204-5.

HAS - nothing definitive revealed in imagery except field wall on south west side. Two marks on surface of mound consistent across 14.042, 24.128, 24.127 may be collapsed structures or the shadow of the building and birket.

GE - 09/02/2010 imagery best for viewing site.

**MAD\_0119. Qaryat el-Jureina.**

MEGA-J: 5692, 11201

Settlement - modern (Qaryat el-Jureina), Settlement - ancient (el-Jureina).

Ancient site is described as a ruin with cisterns and caves, and a "sacred Arab circle" with a grave within (1889: 110). The HAS imagery reveals numerous roofed structures loosely distributed over an occupation mound/limestone knoll with no clear evidence of the location of the older site 'ruin'. Four main tracks intersect site at NE, NW, SW and SE extents, from the directions of S (from Kufeir Abu Sarbut), E and NW. A main track S to Madaba passes just E of site. Modern site is a dense village situated on a limestone knoll or low mound in the landscape. The largest building in the village appears as a central mosque at the peak of the mound, replaced on site in February 2010. Modern housing dominates town fabric though a few possible ruined Ottoman? structures are discernible, as well as low walls that may also be of that date or 20th century in satellite imagery. Architectural debris noted by ground survey on edge of modern town (Ibach 1987: site 109). A mosaic floor of large tesserae has





been found on the site (Ibach 1987: site 110). Dates given by survey: Byzantine dominant; Early Roman; few Iron Age bods; possible Hellenistic, Late Roman; 1 Ayyubid/Mamluk.

AAJ Project: APAAME\_20100519\_DLK-0005, 6, 7, 8; FFR-0009, 10; RHB-0019, 20, 21, 22; SES-0006, 7, 8, 9 - mosque in process of being built; ruined (Ottoman?) structures evident and the occasional reused cistern.

HAS: 8.042-3; 24.127-8 - Extent of 1953 settlement clearly visible - dispersed buildings over mound, with concentrated complex to west side. Obvious traces of older underlying village not evident

GE: Limited evidence of older collapsing structures evident in village fabric on GE imagery. Obvious traces of older underlying village not evident on GE. Best dates for viewing site are 18/11/2003; 20/02/2010. Demolition of old mosque to make way for a new one is recorded on imagery between 09/02/2010 and 20/02/2010.

"ed Dschrēne" - German 1:50,000 Map of Palestine Sheet 81. Mādeba.

Conder 1889: 110 - "El Jureineh": a ruin on the plateau with cisterns and caves. A "sacred Arab circle" with grave, used for storage for ploughs, was also on the site; Musil 1907: 217 el-Grejne - mentioned in passing only; Ibach 1987: Sites 109-110 - both of these features are part of el-Jureina but are from different sections of the site.

### **MAD\_0120.**

No MEGA-J entry for site.

Rectilinear Structure, Cistern/Birket, Channel.

Ruined structure. c. 12 x 12 m. with buttresses evident across north and south walls. A road may be in the vicinity of this site if this is a road tower. Possibly entrance to a cistern and associated rock cut channel also visible in low level oblique imagery by AAJ. May be related to site MAD\_0121 which is c. 115 m. to south.

AAJ Project: APAAME\_20021002\_DLK-0133, 34, 35, 36, 37, 38, 40; RHB-0062, 63, 165, 166, 167, 168, 169, 174.

HAS: 24.128-9 - Site clearly evident.

Evident on GE - no visible change in site condition. Imagery 20/02/2010 best for viewing site.

No known reference to site. cf. name given to site by AAJ project "Qubur Abd Allah" possibly misattributed from site MAD\_0124 - "Kabr Abdallah". May have been covered by the Hesban Madaba Plains Project Hinterland Survey, but this study had no access to the data.

### **MAD\_0121.**

No MEGA-J entry for site.

Rectilinear Structure - Tower?

c. 5 x 11 m with at least one internal division to create two square rooms of equal size. May be related to site MAD\_0120 which is c. 115 m. to north. A road may be in the vicinity of this site if this is a road tower.

AAJ Project: APAAME\_20021002\_DLK-0139, 140; RHB-0064, 170, 171, 172, 173, 175

HAS: Not evident.

GE: site is just visible. No change in site condition evident.

May have been covered by the Hesban Madaba Plains Project Hinterland Survey, but this study had no access to the data.

### **MAD\_0122. Kufeir Abu Bedd (Anc); Kufeir al-Wakhian (Mod); Faysaliyyah (Mod).**

MEGA-J:11192; 11195

Settlement - Ancient (Kufeir Abu Bedd); Settlement - Modern (Kufeir al-Wakhian; Fausaliyyah).

The 1918 German image shows a raised uneven settlement mound in the shape of an 'L' with ends extending North and East and field walls extending from site to the west. According to Glueck it is a Roman-Byzantine-mediaeval





Arabic site. Visible ruins include a group of collapsed ruins on the North end corresponding roughly to the position of the modern cemetery visible on satellite imagery, and a second area of collapsed structures on the eastern end over which an Ottoman building had been constructed. Two other Ottoman structures are also in this vicinity. Cisterns and/or caves are visible on the outer slopes of the settlement mound. A major road passes on the south of the site running SE to NW (Madaba to Mount Nebo road). It is not readily apparent from the photograph where the most mentioned aspect of the site in historical accounts - a large circular upright stone, is situated.

The more recent settlement has extended in the eastern area of the site in the 1953 HAS imagery.

The modern village has developed along the East-West length of the site, branching from the Madaba to Mount Nebo road. The Northern extent of the site remains relatively undeveloped, probably due to being overlain by the modern cemetery. Cisterns and possible agricultural installations have been photographed in the olive grove in this vicinity.

German 1918 Photographs: APAAME\_19180911\_BKA-1168\_DLRK304-2916 - confuses site name as "Rudschm ed Dschazel" (MAD\_0002).

HAS: 24.127-128 - clearly shows the distinct ruined settlement and developing modern settlement concentrated on Eastern leg.

GE: Several of the older buildings of the modern settlement visible in the HAS imagery are visible as ruined structures in the earliest 18/11/2003 imagery. Older structures or ruins are not clearly visible.

AAJ: APAAME\_20130414\_DLK-0196, 97, 98, 99; MND-0320, 21, 22, 23, 24, 25; RHB-0192, 93, 94 - traces of structures underlying modern village clearly evident - walls, lintelled doorways into presumably vaulted chambers, cave or cistern.

APAAME\_20130414\_DLK-0200 - ancient? agricultural traces in olive grove to north of cemetery - cistern, press? etc near 31°45'23.29"N, 35°46'3.49"E.

Regarding the name changes to the site and the circular stone see: Piccirillo 1987: 405.

Glueck 1937-9: 137 (193) "Kufeir Abū Bedd" "small rude village built on an ancient Roman-Byzantine-mediaeval Arabic site"; Musil 1907: 19, 216, 334 "Kfêr abu Bedd" "a small town", Fig. 94. Notes a large circular standing stone; Conder 1889: 134 - "Kefeir Abu Bedd or el Gharby"; Conder 1889: 263 - Kufeir Abu Bedd - regarding the large circular stone 'like a millstone'; Heber-Percy 1896: 14 - "Garb El Kefeir"; Baedeker 1912: 153 - Kafr Abu Bedd; Meistermann 1909: 299 - Khirbet Abou Bedd.

"Kfêr Abu Bedd": German 1:50,000 Map of Palestine Sheet 81. Mādeba Sheet.

### **MAD\_0123.**

No MEGA-J entry for site.

Field Wall.

A field wall at right angles on the east and southern side of a limestone knoll. HAS imagery indicates that the wall once continued further west on its southern side, and met an east-west wall at its northern extent. One well defined section of the wall visible in the low level oblique AAJ images shows the wall is made of unworked stone, two stones deep.

HAS: 8.041-3 A limited series of field walls on limestone outcrop running North - South along the eastern edge of a wadi are evident.

AAJ Project: APAAME\_20130414\_DLK-0185, 87; MND-0292 RHB-0183, 84, 85, 86.

GE: Wall evident on imagery apparently enclosing the limestone outcrop. The first of three large residential structures being erected to the west of remaining extent of fieldwall can be seen at initial stages of construction on imagery dated 18/11/2003.

### **MAD\_0124. Kabr 'Abdallah.**

MEGA-J: 5699

Grave - Ottoman (MEGA-J).



Location uncertain. Possibly mislocated in MEGA-J - confirmation required. JADIS UTM coordinates would place the Tombs on the western ridge (UTME:7624, UTMN:35185).

Site as described by Conder is not evident on HAS imagery. Two settlements, one nucleated on the edge of the plain at the beginning of a valley, the other on a ridge to its west, are in the vicinity of the possible site location but no evidence of older structures are clear. The edge of the plain became the focus of modern development where a village is located. The western ridge had limited development until more recently and the ruins of older structures visible in the HAS imagery are still evident in places.

HAS: 24.128-9. Site not visible. The monastery referred to by Musil may be one of the buildings visible in the imagery but which one is not able to be discerned.

GE: earliest imagery 18/11/2003 shows little development on western ridge and older structures from 1953 are visible but in a ruined state. Imagery dated 24/05/2013 shows development increasing in this area and the resurfacing of the road through area.

Conder 1889: 113 - Kabr 'Abdallah - Mukâm or sacred tomb enclosure of about "10 paces" with an 'altar' on west side. Three masonry tombs, 8 feet high and 10 feet long, erected on high ground on the plateau in an E-W line just north of enclosure. Inhabitants given as chiefs of the Ghaneimât tribe - Abu Marzûk, Mustafa, and Fadl el Herâwi. A disused well is between the enclosure and the tombs; Musil 1907: 355 - "kabr 'Abdalluh - an old monastery with a holy sepulcher; Baedeker 1912: 153 - Kabr `Abdallah "The Jebel Nebâ is now in view; above, to the left, is the Kabr 'Abdallah, or Tomb of 'Abdallah"; Meistermann 1909: 278, 305 - Qabr Abdallah el Adjemi.

"Tombs of Abdullah" - Jordan 1:25,000 Map, Palestine Grid Sheet 210/125 El Quweijîya; "Kabr Abdâlla" - German 1:50,000 Maps of Palestine Sheet 71. Hesbân.

#### **MAD\_0125**

No site for this reference.

#### **MAD\_0126. Serarah.**

MEGA-J: 5706

Enclosures (Conder).

Location uncertain. Enclosure 40 x 30 feet with well (Conder). Site in this vicinity and resembling this description could not be found on HAS or GE imagery. Cf. MAD\_0130

GE/HAS - Not visible in location - cf. MAD\_0130

Conder 1889: 208 - enclosure 40 x 30 feet with well; Mentioned by Musil on the Arabia Petraea Karte, but not in text; JADIS entry: LaBianca Ø.S. 1987: 222 Site 290 - not found.

#### **MAD\_0127. Mejma el-Benat.**

MEGA-J: 11204

Cairn (Conder).

Site location is conjectural: GE/HAS - Not visible in location

At 31°45'37.63"N, 35°49'24.06"E GE/HAS 5.043, 8.042 may show low mound at the meeting point of two wadis which possibly be the location referred to in map and by Musil. No Cairn visible at site location as indicated on map but may have been removed by agriculture.

Conder 1889: 191 - Mejmà el Benât - a small cairn marking the the border between Adwan and Beni Sakhr territory; Musil 1907: 217 - "Meğma` el-Benât" - meeting point of two wadis; JADIS entry: LaBianca Ø.S. 1987: 220 Site 269 - not found.

"Médschmaa el-Benât" - German 1:50,000 Maps of Palestine Sheet 81. Mâdeba (cf. SE of location in the fork of wadi).

**MAD\_0128. Khirbat Berdala.**

No MEGA-J entry for site.  
Settlement.

Site location is conjectural - Palestine 50k 1918 map would indicate a site between Kufeir Abu Bedd and Kabr Abdallah.

HAS: 24.127-9 small settlement and associated terracing at 31°45'59.19"N, 35°46'8.35"E. A building nearby and at the top of the terracing at c. 31°45'55.54"N, 35°45'55.22"E seems to be roofed by a series of three domes - a unique structure

GE: terracing for site very more evident and in use, domed structure clearly evident now alongside a larger building. Possibly a collapsed cistern or cave to west. Main area of settlement has developed - no ruins evident.

"Ch. Bêrdala" - German 1:50,000 Maps of Palestine Sheet 81. Mādeba.

Musil 1907: 334, 355 - "ḥ. Berdala" - on the right of Kabr Abdullah when travelling SE to Kfeir Abu Sarbut. His map places the site between Kufeir Abu Bedd and Kabr Abdullah; Meistermann 1909: 305 - khirbet Berdala. Conder provides the location on his map but not in his text - Berdala.

**MAD\_0129. el-Mschêrfe.**

No MEGA-J entry for site.  
Settlement - modern?.

Location uncertain. HAS: possible collapsed ruin visible on 24.127-8. GE: Nothing visible.

"el-Mschêrfe" - German 1:50,000 Maps of Palestine Sheet 81. Mādeba; Musil 1907: 131, 346 "ḥ el-Mšêrfe" - site only mentioned in passing.

**MAD\_0130.**

cf. MEGA-J:5706; Conder 1889: 208 - Rujm Serarah - enclosure 40 x 30 feet with well.  
Rectilinear structure.

A square feature c. 15 x 18 m. with walls possibly of 2 stones deep situated on the plain between agricultural fields that has been damaged, possibly destroyed.

GE Digital Globe imagery 18/11/2003 - appears to be c 15x18m; GE Digital Globe imagery 15/06/2009 - site appears to be damaged by fence? Or path?; GE CNES/Astrium imagery 24/05/2013 - site appears to be gone; HAS: 8.041-3, 24.128-9 - rectilinear structure outline clearly visible.

Palestine Grid Levant 50k Sheet 59-K-27 Madaba - Map Marked with 'ruin'.

**MAD\_0131. el Kasr / Keseir.**

No MEGA-J entry for site.  
Rectilinear structure - Monastery (Musil).

Location uncertain - HAS - 24.127-9 - possible collapsed structure in this location; cannot confirm on later satellite imagery due to modern housing.

cf. MAD\_0134 to the south - traces of activity (cisterns?) in GE Digital Globe 23/04/2010

Musil 1907: 274, 340 - el-Ḳaşr or el-Ḳşêr - supposedly 'A smaller monastery than Siyaga (274)'. Musil's map would place it on this eastern side of the Mount of Mount Nebo, but his description on page 340 may indicate it on the western side north of Ain Jedeideh.

**MAD\_0132. Deir Shillikh.**



No MEGA-J entry for site.

Ruin? - Tower and cave (Conder).

A circular mound of undefined ruins east of Kufeir Abu Bedd now overlain by modern development. Reported as including a tower and a cave by Conder.

1918 German Photographs: An small mound of ill-defined ruins independent and east from that of Kufeir Abu Bedd.

HAS 24.127-8 - small mound east of Kh. Abu Bedd that appears to have ruined structures and a single building on surface. Tracks go to either side of site.

GE - site is overlain by modern development

Musil 1907: 216, 334 - ٩. Dejr Šillīḥ - only mentioned in passing as next to Kefeir Abu Bedd; Conder 1889: 96 - Deir Šillīḥ, site is part of Kefeir Abu Bedd including a tower and cave. Stones commented as having been piled to form a crude circle; Baedeker 1912: 153 - Deir Šillīḥ; Meistermann 1909: 278, 299 - deir Šillīḥ, no description of site. "Dēr Šillīḥ" - German 1:50,000 Maps of Palestine Sheet 81. Mādeba. Note: site is represented as further south of Kufeir Abu Bedd than we have placed it.

### **MAD\_0133.**

No MEGA-J entry for site.

Farmstead - Ottoman?.

A farm complex of enclosure c. 18 x 16 m. with 4 internal roofed rooms against outer walls opening to central area. An additional external structure c. 4 x 7 m is to the east. Farm possibly dates to the Ottoman (?) period. A modern extension of farmstead has been built alongside to the south. Low level oblique photographs identify large worked stone blocks that may indicate stone has been utilized from an even older site. Structure of what possibly could be a tomb entrance to NNE, and two cisterns to SW and E, also visible on low level imagery.

APAAME\_20130414\_MND-0302-304 - Farmstead in use, half ruined section shows two of the rooms of the main complex and one to the east of complex have lost roofs. Also note a possible reused tomb? to NNE, collapsed Cistern? to E alongside road. Another cistern to SW has a modern cover.

HAS 24.128-9 - all sections of building are roofed and apparently in use.

GE - Digitalglobe 20/02/2010 best imagery for viewing site.

### **MAD\_0134.**

No MEGA-J entry for site.

Birket?, Quarry?

A limestone outcrop on the plain east of Mount Nebo. Rectilinear cuts are apparent in surface, one in centre of structure and two, possibly four in a line on eastern side.

GE 09/02/2010 best to view site - a series of cuts, possibly Birket or Cistern on eastern side of limestone outcrop

HAS 24.127-8 - Limestone outcrop is visible but no features visible on surface.

### **MAD\_0135.**

No MEGA-J entry for site.

Collapsed structure?

An undefined form of what appears to be rubble that may indicate a collapsed structure.

GE DigitalGlobe 20/02/2010 best for viewing possible structure. Appears to be in an advanced state of rubble. Not clear on other imagery or HAS.

**MAD\_0136.**

No MEGA-J entry for site.  
Rectilinear structure.

Rectilinear structure, roofless, consisting of two rooms, the shadow cast suggesting the NNW wall contains a door. Walled terrace to west, wadi with water catchment walls to east. Structure appears nestled into side of slope, perhaps indicating the presence and use of a cave.

GE DigitalGlobe 20/02/2010 best for viewing possible structure.

HAS 27.127-8 - Feature indistinct on imagery and not as expected, a rounded feature instead of a rectilinear roofed structure. Agriculture to west and east also not evident.

**MAD\_0137.**

No MEGA-J entry for site.  
Rectilinear structure - enclosure?

Square? Enclosure c. 15m; possibly with small rectilinear structure to SW corner.

GE DigitalGlobe 20/02/2010 best for viewing possible structure.

HAS 27.127-8 - Evident in imagery with solid white indicator in SW corner supporting presence of roofed structure there.

**MAD\_0138.**

No MEGA-J entry for site.  
Rectilinear Structure, Enclosure.

On the slope of a wadi valley - Rounded enclosure to western side with ruined rectilinear structure alongside to the east, possibly on a higher ridge.

GE DigitalGlobe 20/02/2010 best for viewing possible structure.

HAS 24-127-8 - roof of rectilinear structure evident but not enclosure.

**MAD\_0139.**

No MEGA-J entry for site.  
Ruin?

Possible small ruin of structure?, c. 20m square?, on low knoll alongside road heading NE to Hesban. Underneath modern development.

GE - not visible due to development  
HAS 8.041-3, 24.128-9.

**MAD\_0140.**

No MEGA-J entry for site.  
Ruin?

Possible small cluster of ruins?, c. 30 m diameter, on a limestone outcrop on the western edge of the plain. Underneath modern development.

GE - not visible due to development  
HAS - 8.041-2, 24.128-9

**MAD\_0141. Arish?**

cf. MEGA-J:5696

Settlement - modern

A limestone knoll or settlement mound on the plain. HAS imagery reveals a disturbed surface with a few buildings, perhaps comprising of a single farmstead. Effort appears to have been made to fence the majority of the mound off with a wall. Faint traces of sheep/goat fold enclosures. Appearance of disturbed surface may indicate possible older structures on site. Now overlain by modern development.

GE - built over by modern village

HAS 8.041-2, 24.128-9 - the latter is the better imagery.

cf. MEGA-J:5696 'Arish' may be mislocated and this is the site meant by Conder (no visible site in MEGA-J location). Conder 1889: 87 - "A little knoll in the plain with modern Arab graves of flint stones"; Musil 1907: 355 - ħrejbet el-Ariš - only mentioned in passing.

**MAD\_0142. Kefeir Abu Khinan (West) / Reservoir.**

No MEGA-J entry for site.

Reservoir.

Conder (1889:140) provides the size of this feature: 24 m x 18 m, with a depth of 7.5 m. It was apparently partly built with squared masonry.

The site is visible in HAS. It is already completely filled with debris in Nov 2003 (GE).

**MAD\_0143. Jalul.**

View individual subsites for information MAD\_0027 and MAD\_0050.



**Appendix 2. Ancient Roads in Survey Area**

Four major ancient settlement sites exist within the survey area –Madaba, Ma’in, Jalul and the monastic settlements in the region of Mount Nebo. A road network would have connected all of these settlements, and the minor centres in between. Surprisingly little is known regarding this integral feature of the ancient landscape in this region however.

The main Roman road in this region, the *Via Nova Traiana*, or a spur of that major artery, passed from Amman (possibly then to Hesban), south to Madaba, and then further south to cross the Wadi Mujib (Graf 1997: fig. 1; Borstad 2000, 2008) but its exact route continues to be somewhat of a mystery.

This review has identified and mapped in a GIS the sections of possible ancient roads visible in the available photographic and remote sensing sources. The majority of these are identified in the vicinity of Jalul (MAD\_0028-32), one is the excavated section of Roman Road within the protected archaeological precinct of Madaba (MAD\_0007), and one is an exposed section of road south of Madaba photographed by the Aerial Archaeology in Jordan Project (MAD\_0033) (see table).

In addition to this, the review has approximately mapped in a GIS some possible routes of ancient roads between the major sites listed above. These are overwhelmingly based on the well-used passages through the landscape evident on the visual material, significantly the HAS imagery. In addition, a surprising source of information was the 1:50,000 German 1918 maps: two milestones are indicated along the road south from Madaba to Libb, one c. 4.3 km S of Madaba, the next c. 8 km south, but there is no way of knowing what was the source of these indicated positions. Most likely, they drew upon Thomsen’s index (these are milestones #114 and #115 in his index, Thomsen 1917: 47), who in turn drew upon Germer-Durand (1897), Brünnow & Domasewski (1904) and Smith (1905).

As many of the probably ancient road routes have continued to be used over time, the visible trace of them observable through remote sensing is limited. However, the construction of the Madaba Ring Road is a rare opportunity to gain insight into the position of ancient roads to and from the ancient city. A thorough investigation of the landscape set aside for the ring road would allow for cross sections to be investigated for the trace of ancient thoroughfares, and ground survey would allow for the presence of major artefacts associated with roads, such as worked stone used for curbing, milestones and road towers or stations, to be potentially found. These would inform regarding the position of the roads as they approached Madaba. Where traces of roads are found, an archaeological section could be excavated providing a wealth of information regarding the date, use and construction of the road before the feature is destroyed by the construction of the new ring road.

| Site Reference            | Information  | Reference Material  | Recommendations |
|---------------------------|--|---|-----------------|
| MAD_0007<br>(MEGA-J:3037) | Madaba/Roman Road. Protected site, part of the Burnt Palace site and Archaeological Park. Perfect condition in May 2013 (GE) | ACOR Plan 6; Bikai & Dailey 1996: 29  |                 |
| MAD_0028                  | Visible in HAS, but covered in gravel before Nov 2003 and received tarmac before Nov 2004 (GE).                              | Site is not photographed by APAAME, but clearly the continuation of the road NW of Tell Jalul |                 |
| MAD_0029                  | Visible in HAS, still in perfect condition in Apr 2013 (GE) and Oct 2014 (APAAME_20141028_DLK-0242)                          |   |                 |
| MAD_0030                  | Faintly visible in HAS, mostly obliterated by modern road. Only a small section is visible just W of the                     | Site is not photographed by APAAME, but clearly the continuation of the road NW of Tell       |                 |





|                 |   |  |  |
|-----------------|---|--|--|
|                 | bend of the modern road (Apr 2013 GE).  | Jalul  |  |
| <b>MAD_0031</b> | Visible in HAS, still visible for ca. 1 km S of Jalul Road 7 in GE imagery (Nov 2004), cut at ca. 850 m S of Jalul Road 7 by road construction beginning before Dec 2009 (GE) | APAAME photography 'Jalul Road 8' (e.g. APAAME_20141028_DLK-0235-7; NQ-0028-9) is taken just a few hundred metres E of this road. Pin shifted      |  |
| <b>MAD_0032</b> | Visible in HAS, still very well preserved at the W edge of an olive orchard in Oct 2014 (APAAME_20141028_REB-0192)  |  |  |
| <b>MAD_0033</b> | Visible in HAS, still in excellent condition in Apr 2013 (APAAME_20130414_MND-0467) and May 2013 (GE).  | Pin shifted to centre of sector depicted in APAAME_20130414_MND-0467, which stands just E of the perimeter of a modern house and its walled garden | Regular monitoring of this tract is highly recommended owing to the vicinity of modern house and bedouin tents being set up here in the Spring. The ring road will cut across this road ca. 1 km N of this point. A test trench investigating its stratigraphy would be recommended. |



## Madaba Ring Road Survey

### Road network in Madaba

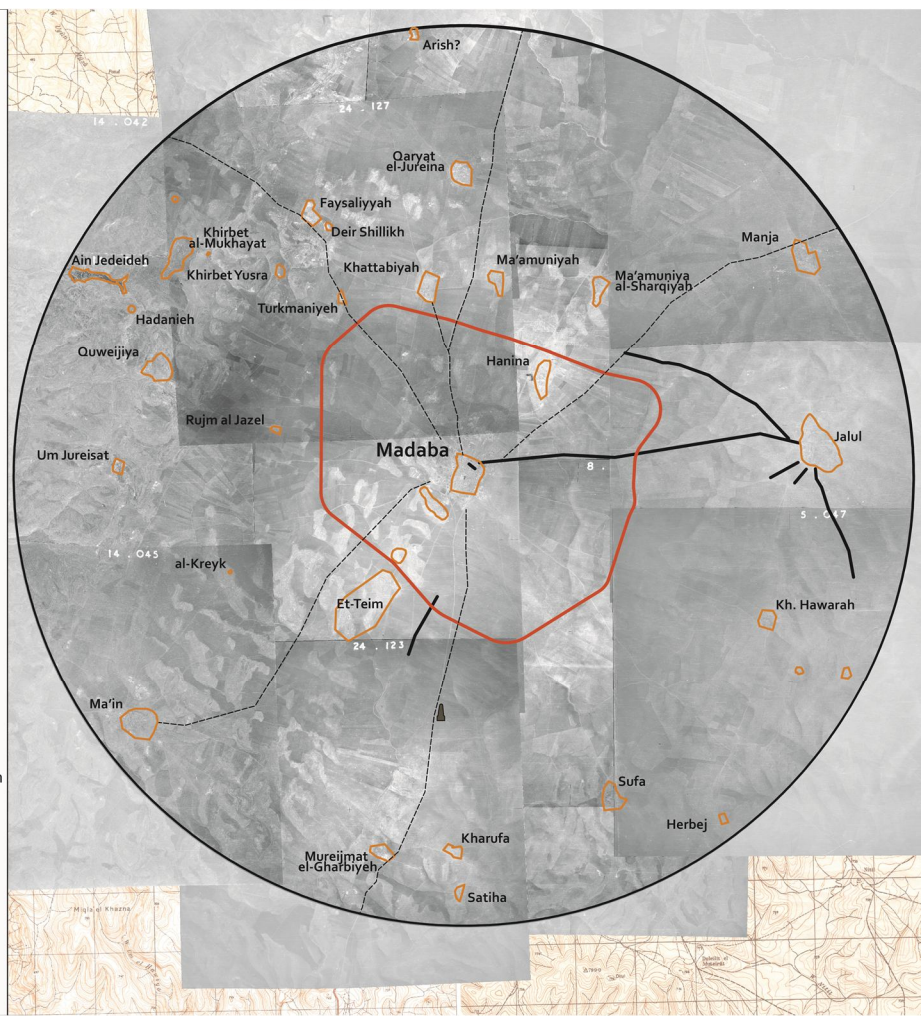
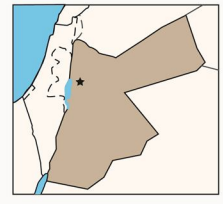
EAMENA for the Department of Antiquities of Jordan



- Roads (ancient)
- Roads (conjectural)
- Milestone
- Madaba ring road
- Extent of EAMENA Survey
- Site extents

Backdrop: Hunting Aerial Survey (1953);  
1:25,000 topomaps (1956)

0 2 4 Km





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