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Theodor Wiegand in Mitzpe Shivta: Spolia and Heritage Protection Along the Ottoman Military Railway

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ABSTRACT

Theodor Wiegand in Mitzpe Shivta

Spolia and Heritage Protection Along the Ottoman Military Railway

Sina Lehnig – Michael Peleg – Jörg Linstädter – Guy Bar-Oz – Gil Gambash

The late antique/Early Islamic settlement of Mitzpe Shivta (El-Meshrifeh, Khirbet el-Misrafa, Khirbat al-Mushrayfa, Mesrafeh, Mishrafa) in the Negev Desert, a site closely linked to monasticism and pilgrimage, is renowned for its rock-cut rooms and Christian pilgrim inscriptions. Yet, historical photographs unveil a different facet of its history: once adorned with stone-built structures like towers and retaining walls, many of these features no longer endure. While our excavations demonstrated that parts of the site were already destroyed by an earthquake in the 8th-9th century C.E., the German archaeologist Theodor Wiegand suggested that a significant portion of Mitzpe Shivta's architecture, still visible on older photographs, was obliterated during the construction of the Ottoman Military Railway in Palestine (1915–1916). Our study, integrating archival sources and archaeological surveys, supports Wiegand's reconstruction. During World War I, the Negev became a border zone between the Ottoman Empire and British Egypt. The railway from Beersheva to Qusseima was built to transport troops and supplies, facilitating Ottoman control of the Suez Canal. Military time pressure, resource shortages, and harsh environmental conditions prompted the extraction of high-quality ashlar masonry from Mitzpe Shivta for the construction of bridges and channels. At the same time, Wiegand, Djemal Pasha and Bedjed Bey sought to implement protective measures to safeguard the threatened archaeology. Exploitation, however, resulted in significant loss of Mitzpe Shivta's architecture, so later archaeologists focused on its preserved rock-cut rooms. Historical photos provide a fresh perspective on the settlement before the Negev became a theatre of war.

KEYWORDS

Ottoman Military Railway, Theodor Wiegand, World War I, Spolia, Historical Photographs, Survey, SfM

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GUY BAR-OZ – GIL GAMBASH

Theodor Wiegand in Mitzpe Shivta

Spolia and Heritage Protection Along the Ottoman Military Railway

Introduction

1 Although the Negev Desert was a territory of the Ottoman Empire since the 16th century, for most of the time it was not subject to its political, administrative and cultural sphere of influence. This status changed in the 19th century when the desert region became the border between the rival nations of British Egypt and the Ottoman Empire (Fig. 1). From this point onward, increased Ottoman advances into the area were recorded, accompanied by infrastructure projects which aimed to prepare the region for an attack on Egypt. During World War I, these activities culminated in the construction of a branch-line of the Ottoman Military Railway that ran from Beersheva to Qusseima at the Sinai front. The renewed geopolitical interest in the Negev was accompanied by an increase in European expeditions aimed at mapping the previously unexplored desert area. Their reports and photographs showcase that the expanding human presence in the Negev also had an impact on its archaeological heritage.

2 The late antique hilltop settlement of Mitzpe Shivta is located just 1 km north of the Ottoman railway embankment (Fig. 2). Historical photographs taken of Mitzpe Shivta between 1869 and the 1930's reveal a noticeable loss of building substance within this timeframe. During World War I, the German classical archaeologist Theodor Wiegand (Fig. 3), visited the Negev Desert in his positions as Captain of the Landwehrartillerie and Inspector General of antiquities in Syria, Palestine, and the Arabian Peninsula. He attributed the destruction of archaeological structures in Mitzpe Shivta to the construction of the Ottoman Railway (1915–1916). This perspective is articulated in his diary[1], a letter to his wife[2] and his later publications, specifically »Denkmalschutz und Kunstwissenschaftliche Arbeit während des Weltkrieges in Syrien, Palästina und We-

1 Deutsches Archäologisches Institut, DE DAI-Z-AdZ NL-WieT-00883, Diary entry of Theodor Wiegand from November 16, 1916.

2 Wiegand 1970, 206.

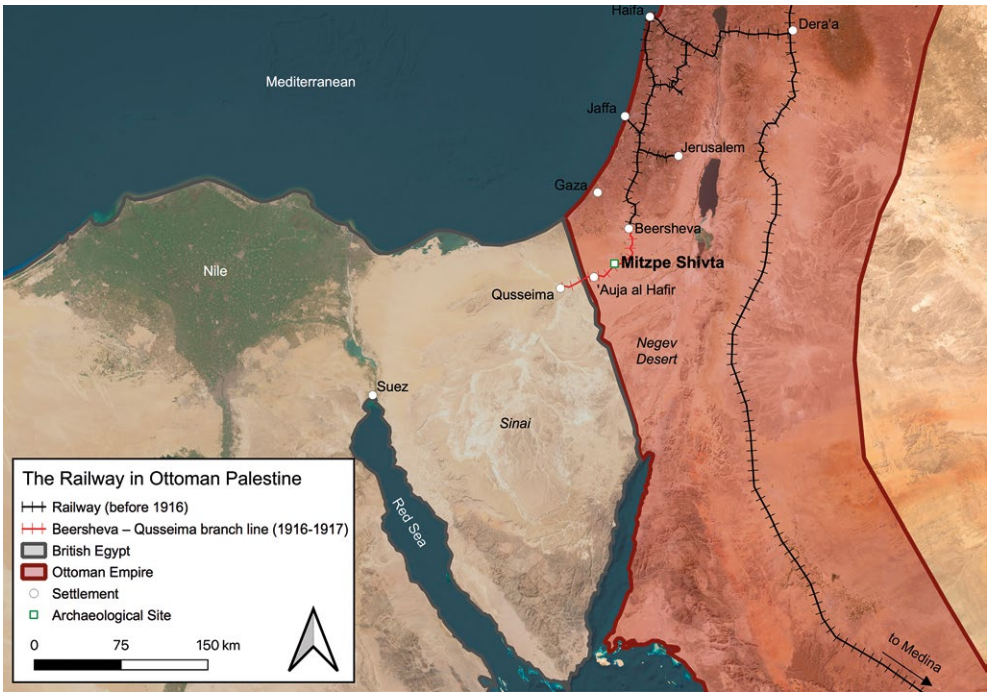

Fig. 1: Political map of British Egypt and the Ottoman Empire at the onset of World War I. The map identifies Mitzpe Shivta and other locations referenced in the text and illustrates the trajectory of the Ottoman railroad, notably the line between Beersheva and Qusseima

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starabien«[3] and »Sinai«[4]. Although the railway route between Beersheva and Qusseima did not run through hilly terrain, it had to cross smaller wadis in many places. To prevent the railway from being damaged or washed away during winter floods, bridges and water crossings needed to be built into the embankment. In this paper, we aim to examine Wiegand's claim in more detail, hypothesizing that the dismantled building material from Mitzpe Shivta was recycled for building bridges and channels along the railway adjacent to the archaeological site. Hereby, we are looking at the widespread practice of stone looting under Ottoman rule in the region[5], with Mitzpe Shivta serving as a striking example. The study is designed to accomplish four primary objectives:

1. Clarify the causes underlying the exploitation of ancient building material during the Late Ottoman Period; including the general attitude towards cultural heritage within the empire.
2. Reconstruct which structures in Mitzpe Shivta were affected by destruction and how this altered the site's appearance.
3. Establish whether the bridges and channels adjacent to Mitzpe Shivta were indeed the final destinations for the archaeological material mined at the site, exploring how it was treated and recycled.
4. Evaluate Wiegand's legacy as an archaeologist in the Negev and his lasting impact on the understanding of Mitzpe Shivta's history and the protection of the site, particularly in light of his appointment as the head of the »German Turkish Commando for Monument Protection«.

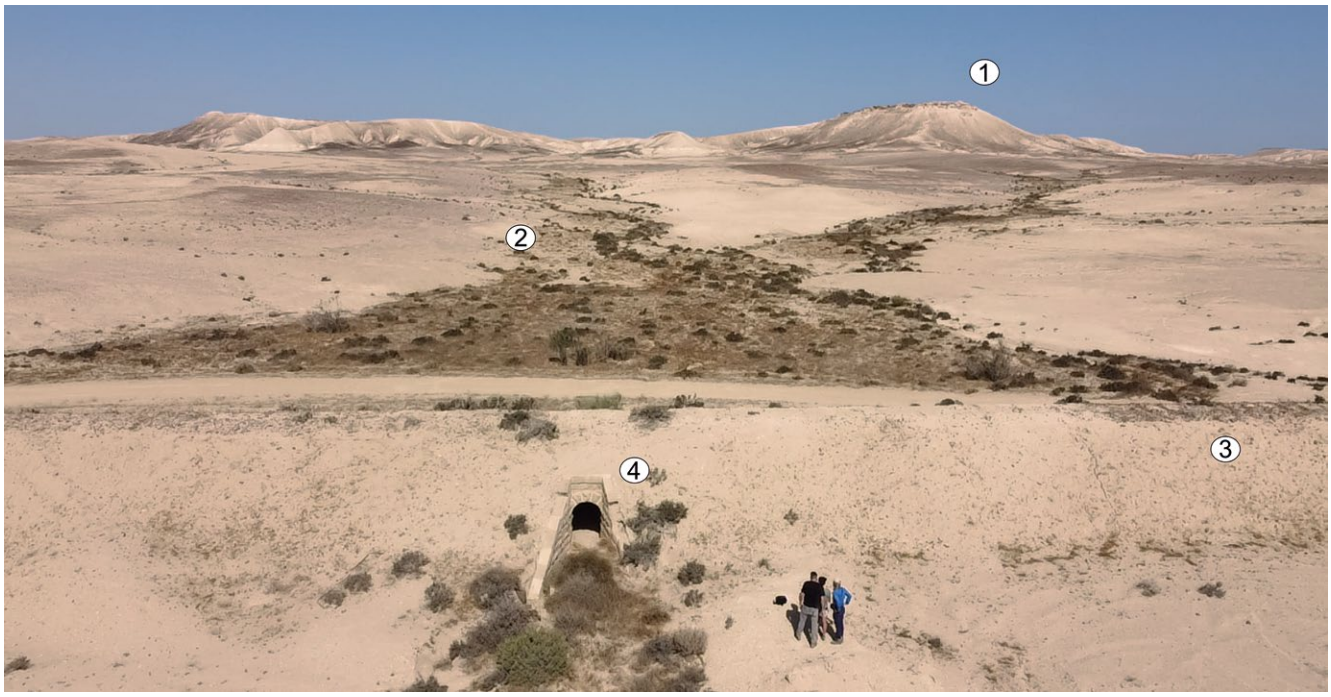
3 To this end, we will reconstruct the historical setting of the railway construction in the Negev using i. a. primary literature from contemporary witnesses.[6] In doing so, we

3 Wiegand 1919, 174.

4 Wiegand 1920, 65.

5 See e. g. Lawrence – Woolley 1914; Wiegand 1970, 206; Erickson-Gini – Oach 2019, 9; Heinzelmann et al. 2022, 242.

6 Friedrich Freiherr Kreß von Kressenstein, Commander of the 1st Turkish Expeditionary Corps: Kreß von Kressenstein 1938; his diary edited by Baumgart 2020. Guy Powles, brigade major of the New Zealand Mounted Rifles Brigade: Powles 1922. Alexander Aaronsohn, Zionist, Spy and soldier in the Ottoman army: Aaronsohn 1916. Theodor Wiegand, Archaeologist and Captain of the Landwehrartillerie: letters to Marie Wiegand and Gerhard Wiegand edited by Wiegand 1970.



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will work out the political, economic and environmental conditions of the Late Ottoman period in Palestine and their impact on decision making during construction works. In a further step, we will analyze Wiegand's role in the Negev and his statements on the destruction in Mitzpe Shivta. Historical photographs of Mitzpe Shivta from archives[7] will be examined for evidence of destruction and loss of building substance. A survey of the railway embankment opposite Mitzpe Shivta documents its stone-built features putting special emphasis on the material used, their style and quality. A provenance analysis of the building materials used will clarify whether it was actually recycled from Mitzpe Shivta.

3

Mitzpe Shivta

4 At a first glance, Mitzpe Shivta in the northern Negev Desert, about 50 km south of Beersheva, is located in an arid, sparsely populated region. Yet satellite images reveal the remains of thousands of agricultural installations and structures that bear witness to a period between the 4th and 6th centuries C.E. when the Negev experienced an unprecedented economic and demographic heyday, with wine becoming the major cash crop.[8] Mitzpe Shivta was embedded in this thriving agricultural landscape of irrigation systems and farms. Positioned on a plateau (460 m a.s.l.) and surrounding

Fig. 2: The Mitzpe Shivta settlement hill (1) and wadis (2) leading towards the preserved railroad embankment (3), situated 1 km from the archaeological site. Seasonal water passes the embankment through stone-built bridges and chanals (4)

Fig. 3: Theodor Wiegand in El-Arish 1916

7 Deutsches Archäologisches Institut (Berlin), Palestine Exploration Fund (London), UCL Colt Archive (London).

8 Fuks et al. 2020; Tepper et al. 2020; Avni et al. 2023; Cohen et al. 2023.

4

Fig. 4: Photograph of Mitzpe Shivta with main features: 1: church, 2: peristyle house, 3: prayer niche, 4: cistern, 5: water pipe, 6: entrance gate, 7: towers, 8: retaining walls of the lower fortification, 9: entrances to rock-hewn rooms, 10: buildings of the upper fortification, 11: lower fortification, 12: agriculture (Arne Schröder)

slopes, the site boasts a perimeter wall, towers, a church, a chapel, domestic units, a large cistern, and numerous rock-hewn rooms adorned with inscriptions and cross paintings (Fig. 4).[9] Although commonly identified as an early Christian monastery, pilgrim hostel, or fortress since the mid-19th century[10], Mitzpe Shivta remained largely unexplored and forgotten. In 2022 we initiated a research project with the aim to delve into the settlement's history for the first time, and explore the contributions of pilgrimage and monasticism to socio-cultural fluctuations in the Byzantine Negev agricultural society.[11]

5 Current findings, including inscriptions, radiocarbon dates, and pottery, suggest an occupation of Mitzpe Shivta from the 5th/6th to 8th/9th centuries C.E., spanning the Middle Byzantine to the Early Islamic and Abassid periods in the Negev Desert.[12] The Middle Byzantine era (450–550 C.E.) witnessed the prosperity of the region through the Mediterranean-wide export of locally produced wine, particularly in distinctive Gaza Wine Jars.[13] This economic success allowed settlements to expand and invest in public projects.[14] The advent of the Justinian Plague around 541 C.E. marked a downturn, leading to a decline in wine exports and the replacement of Gaza wine jars with multi-purpose bag-shaped amphorae.[15] From 620 C.E., so-called Akaba Jars attest to the Arab influence from the south. Pilgrim inscriptions suggest a boost in Mitzpe Shivta's economy due to Christian tourism to St. Catherine Monastery at Mount Sinai (548–565 C.E.).

9 Lehnig et al. 2023; Gambash et al. 2023.
10 Palmer 1871; Musil 1907; Lawrence – Woolley 1914; Wiegand 1920; Baumgarten 1986; Figueras 2007.
11 Lehnig et al. 2023. New radiocarbon dates not yet published.
12 Lehnig et al. 2023; Gambash et al. 2023; Erickson-Gini pers. comm.
13 Heinzelmann et al. 2022, 253.
14 Avni et al. 2023, fig. 7.
15 Heinzelmann et al. 2022, 275.

This economic resilience persisted alongside a declining agricultural environment until the 8th century C.E., after which settlement in the Negev gradually disappeared.[16] Our excavation findings suggest that earthquakes likely contributed to the destruction and abandonment of the settlement at Mitzpe Shivta between the 8th and 9th centuries C.E.

The Ottoman Military Railway in the Negev Desert

Political Background

6 Fig. 1 demonstrates that the Negev region, and in particular Mitzpe Shivta, were placed in a dynamic political milieu beginning in the mid 19th century. Although the Negev had been part of the Ottoman Empire already since 1517, for most of the time the arid region enjoyed almost complete autonomy and minimal political attention due to its sparse settlement. In the early 19th century, it was populated by Bedouin tribes with a pastoral lifestyle, especially near settled areas close to Gaza and Hebron.[17]

7 Efforts to gain administrative control commenced in 1858 with the Ottoman Land Code[18], aiming to integrate local Bedouins into the Ottoman system as tax-paying and sedentary subjects.[19] However, most of them did not follow requests to register their land and pay taxes, leading to far-reaching consequences that persist to this day.[20]

8 From 1900 onwards, the European-style towns Beersheva and ʻAuja al Hafir were built in the Negev. Their establishment was intended to strengthen the area against advances from neighboring British Egypt. The 1906 agreement on the geographical location of the Separating Administrative Line between British Egypt and Ottoman Palestine placed the Negev in the border area between the two rival states.[21] During World War I, in alliance with the Germans, it became the Ottoman Empire's strategic goal to occupy the Suez Canal and extend the war to Egypt.[22] Djemal Pasha, who ruled the Ottoman Empire in a triumvirate with Enval Pasha and Talaat Pasha since 1913, was nominated to lead the Ottoman army against the British.[23] Under the command of German Colonel Friedrich Kreß von Kressenstein, Djemal Pasha's army set out from Beersheva in January 1915 to attack the Suez Canal, crossing the entire Negev and Sinai from east to west. However, a lack of infrastructure in the underdeveloped and previously neglected Negev Desert, as well as a strong British defense, hindered the achievement of this goal and Djemal Pasha's and Kreß von Kressenstein's soldiers had to withdraw from the Canal.

9 On the Negev-Sinai front, deficiencies that had already begun to emerge before the Ottoman Empire's entry into the First World War[24] became tangible: since 1875 the Ottoman Empire had been completely bankrupt.[25] The large territorial state was by no means a culturally and logistically cohesive entity, but rather fragmented into

16 Gambash et al. 2023.

17 Palmer 1871, 292; Kressel et al. 1991, 28; Fischel – Kark 2008, 135; Saidel – Erickson-Gini 2014.

18 Ongley – Miller 1892.

19 Fischel – Kark 2008, 148.

20 Similar to the colonial legal *terra nullis* concept, unregistered Bedouin land was declared as *Mevat* – uninhabited, uncultivated, dead land – and therefore became the property of the state who held the rights for cultivation and grazing: see Ongley – Miller 1892, 54–56; Kark – Frantzman 2012, 55; Kedar et al. 2018, 3.

21 Warburg 1979.

22 Aaronsohn 1916, 38; Gat 2005; Schulz 2013; Erickson 2016; Berelovich – Kark 2017.

23 Link to an original video documenting the war on the Negev-Sinai front on the Ottoman side: https://www.filmportal.de/video/bei-der-iv-tuerkischen-armee-in-palaestina (Deutsches Bundesarchiv).

24 These deficiencies are comprehensively compiled in Berelovich – Kark 2017, based on a detailed study of Ottoman, Ottoman Turkish, Hebrew, German, English and Arabic sources.

25 Birdal 2010.

small administrative units in which people of numerous religious and ethnic identities lived. Due to the disastrous financial situation, large-scale projects, such as a coherent transport network, could not be implemented. Funding for such projects increasingly came from local or foreign private investors, who built roads and railways for their own benefit. Before World War I, out of the 6085 km of railroad tracks in the entire empire, only 665 km were located in Palestine and none in the sparsley populated Negev.[26] The existing ones (Jerusalem-Jaffa, Haifa-Der'a, Hejaz) were not connected to each other due to different track gauges and were therefore not suitable for military use. Furthermore, Palestine was not equipped to act as an active front in the war in terms of personnel, transport and riding animals.[27] By the Ottomans entry into World War I things were further complicated by a lack of maps and knowledge of the Negev area[28], as well as a British sea blockade that isolated Palestine from the international market. Thus, one of the most decisive battles for the Ottomans was going to be fought in a mostly unknown region with a fundamentally underdeveloped infrastructure.

10 Kreß von Kressenstein initially concentrated soldiers in Beersheva to capture the Suez Canal, but the situation deteriorated rapidly. Contemporary eyewitnesses describe the situation of Ottoman soldiers as disastrous[29]: The Beersheva camp suffered from insufficient water, food, and medicine supply, leading to the starvation and death of humans and animals. After an unsuccessful attempt to seize the Suez Canal, the situation worsened further with disease outbreaks, desertions, and a locust plague.

Construction of the Beersheva – Qusseima Branch-Line: Hopes and Challenges

11 After the failed Suez campaign, Djemal Pasha and Colonel Friedrich Kreß von Kressenstein redirected their efforts for the years 1915–1916 to enhance infrastructure in the Negev, preparing for a second attack. This included the dispatch of German military units, equipment, and surveyors to improve Ottoman forces and map the Negev and Sinai.[30] In July 1916, 400 German officers and 1500 soldiers, including specialists like radio operators and aviators, arrived in the Negev.

12 Probably the most ambitious project of that time was the construction of a railway line (Fig. 5. 6) connecting the isolated southern desert areas with the Hejaz Railway that ran between Medina and Damascus. The Turkish leadership had realized that the Suez Canal could only be conquered by supporting the supply of its troops with a railroad. The German engineer Heinrich August Meißner was entrusted with the supervision of this large-scale project. Meißner boasted a great deal of experience, as he had previously managed the construction of the Hejaz Railway, the Haifa-Der'a line, the Baghdad Railway and others.[31] Thus, in 1915, the Haifa-Der'a line was connected to the Jaffa-Jerusalem line, whereby the tracks between Jaffa and Lydda were dismantled due to material bottlenecks to enable further construction progress towards Beersheva.[32] By October 1915 the military railway reached Beersheva and by May 1916 it reached Auja' al Hafir. The stretch from Auja to Qusseima in the Sinai could not be completed due to approaching British troops.

26 Cotterell – Frey 2011, 28; Berelovich – Kark 2017, 3.

27 Berelovich – Kark 2017, 3; see also: Kreß von Kressenstein 1938, 63.

28 To find their way around, Germans and Ottomans had to rely on the local Bedouin population: Kreß von Kressenstein 1920, 15; Kreß von Kressenstein 1938, 53.

29 Aaronsohn 1916, 36–49; Kreß von Kressenstein 1938, 82. 180; Wiegand 1970, 181. 191; Baumgart 2020, 359. 395. 410. 418. 421. 518.

30 Schulz 2013. See Willert 2021, 3 for German specialists sent to the Ottoman Empire for mapping purposes.

31 Peak 1979, 117.

32 Cotterell – Frey 2011, 31.

5

6

Fig. 5: Construction work at a railway embankment during World War I

Fig. 6: Turkish troops with supplies on railway carriages on their way to the Negev-Sinai front

13 While construction up to Beersheva proceeded at a rapid pace (500 m per day), construction in the Negev region faced various difficulties:

- The topography of the Negev with its numerous wadis made it necessary to build bridges and channels[33], which required materials, time and manpower.
- A shortage of materials had already become apparent during construction in the north, which is why old railroad lines were dismantled and recycled.
- The empire was faced with a personnel problem, as numerous soldiers had deserted.[34] Thus, many conscientious objectors were pardoned and deployed as workers, emphasizing the high priority of the railway construction.[35]
- The large-scale resettlement of Armenians diverted significant resources, and the subsequent genocide resulted in a loss of know-how and labor.[36]
- Concurrent British efforts on a Sinai railway and water pipeline intensified time pressure on the Ottoman-German railway construction.
- Workers unfamiliar with the arid climate suffered from heat and supply shortages, resulting in casualties.[37]

14 From Kreß von Kressenstein's perspective, the railway's construction incurred substantial costs outweighing its benefits, leading to his repeated appeals to halt the project.[38] However, for both Meißner and Djemal Pasha, the railway had soon developed into a prestige project: both pursued the goal of being the first to build a railroad through the Negev and Sinai. Ultimately, the operation of the railway was characterized by great difficulties[39]: There was a lack of wood for heating the locomotives, which is why olive trees were cut down in the Negev.[40] Furthermore, a lack of lubricant made it necessary to use olive oil or castor oil instead, causing considerable damage to the locomotives.[41]

15 Despite its inefficiency, the railway posed a threat to the advancing British forces nearing Gaza.[42] In spring 1917, the British sabotaged the railway by destroying tracks and bridges, rendering it inoperable.[43] Following the Ottoman surrender in

33 Kreß von Kressenstein 1938, 173.
34 Kreß von Kressenstein 1938, 59; Beşikçi 2012, 247.
35 Cotterell – Frey 2011, 31.
36 Baumgart 2020, 475.
37 Kreß von Kressenstein 1938, 57. 144; Baumgart 2020, 518. 523.
38 Kreß von Kressenstein 1938, 156; Baumgart 2020, 539.
39 Kreß von Kressenstein 1938, 170; Baumgart 2020, 571.
40 Baumgart 2020, 442. 461.
41 Wiegand 1970, 180: Plantations of castor-oil bushes were planted to replace lubricants.
42 Powles 1922, 110; Baumgart 2020, 469.
43 Shafi 1998. In the course of 1917 and 1918, the British destroyed numerous railway sections in the Ottoman Empire. Thomas Edward Lawrence took a leading role here: Lawrence 2009.

1918 and the establishment of the British Mandate for Palestine, the railway tracks were removed in 1924, leaving only the embankment, a few bridges, and channels as remnants.

Theodor Wiegand in Mitzpe Shivta (1916–1917)

Arrival at the Sinai Front

16 Archaeologist Theodor Wiegand[44] arrived at the Sinai front in October 1916 – just when supply problems and illness in the camps had reached their peak. The initial purpose of his stay at the front was to lead a troop transport from Berlin to the Negev Desert.[45] On arrival, however, Wiegand wished to visit and document the ancient sites in the Negev Desert and approached Kreß von Kressenstein for logistical support of his expedition. Kreß von Kressenstein first encountered Wiegand's plan to carry out an archaeological field trip in the middle of the war with total disbelief and saw the request as an impertinence in the midst of the catastrophic logistical and social situation in the Negev: »[…] *stellte an mich das Ansinnen, Wiegand die benötigten Kamele und Begleitmannschaften zu stellen. Diese Zumutung war mir ein neuer Beweis dafür, welch völlig falsche Vorstellungen man sich trotz aller unserer Berichte bei den maßgebenden Stellen in Berlin noch immer von der Einstellung unserer Bundesgenossen machte.*«[46] Nevertheless, Kreß von Kressenstein supported Wiegand's plan and arranged an audience with Djemal Pasha, attempting to persuade him to approve archaeological expedition by drawing a comparison with Napoleon's expedition in Egypt: »*Bei meinem nächsten Besuch bei Djemal erinnerte ich ihn daran, daß Napoleon auf seinem Zug nach Ägypten von einem Stab von Gelehrten begleitet war* […].«[47] Djemal Pasha's existing interest in the documentation, publication and preservation of archaeological heritage[48] was further boosted by Kreß von Kressensteins and Wiegands attempts.[49] He began to see antiquities – in particular Byzantine, Islamic and Ottoman – as a key to create a strong national Ottoman identity in a multi-ethnic state and to transport Ottoman authority to marginal regions such as the Negev Desert.[50] Accordingly, he appointed Wiegand as the head of what would later be called the »German-Turkish Commando for Monument Protection« and equipped him with horses, camels, local guides, a doctor and camel drivers from the military's resources.[51] The official goals of the commando, as outlined in Djemal Pasha's book[52], encompassed documenting and safeguarding ancient monuments, preventing the use of ruins as building material by the local population, and enhancing accessibility for visitors. Behind the scenes, however, Wiegand saw the expedition as an opportunity to acquire lucrative sites and objects for the Royal Museum in Berlin, as can be seen from his correspondence with Wilhelm von Bode.[53] As the leader of the expedition, Wiegand

44 On Theodor Wiegand: Cobet 2010; Trümpler 2010.

45 Kreß von Kressenstein 1938, 198.

46 Kreß von Kressenstein 1938, 198; see also Baumgart 2020, 608: »*Herr Wiegand hat lange in der Türkei gelebt u. ist unglaublicher Weise hierher geschickt worden, um jetzt Forschungen vorzunehmen. Die Türken sollen davon nichts wissen, aber ich soll ihm türkische Pferde u. Kamele u. Eskorte geben. Ich bemühe mich, das Vertrauen des mißtrauischen Djemal zu erwerben, u. dann muthet mir das preußische K.M. solche Dinge zu.*«

47 Kreß von Kressenstein 1938, 198.

48 Willert 2021, 5.

49 Pascha 1918.

50 Willert 2021, 5 f.; Trümpler 2010, 475–483.

51 Wiegand 1970, 206.

52 Pascha 1918.

53 Staatliche Museen zu Berlin Zentralarchiv (SMB-ZA), NL Bode 5885/3, Letter from Wiegand to Bode, Berlin, Juli 2, 1916.

was accompanied by archaeologist Carl Watzinger, the architect Karl Wulzinger – who had previously worked in Milet – and engineer Walter Bachmann.[54]

Mitzpe Shivta

17 Less than two weeks after his appointment as head of the commando on November 1, 1916, Wiegand departed for the Byzantine Negev settlements of Rehovot (Arab.: Khirbet Ruheibeh), Oboda (Hebr.: Avdat, Arab.: Abde) Nessana (Hebr.: Nitzzana, Arab.: Auja al Hafir), Sobata (Hebr.: Shivta, Arab.: Subeita) and Mitzpe Shivta. He compared them with Priene (Turkey) and believed to be the first to properly discover and publish them – unaware that the British archaeologists Lawrence and Woolley already done so.[55] Wiegand interpreted the Negev settlements as a manifestation of an early Byzantine ruler's directive to colonize the desert: »*Der Wille eines mächtigen frühbyzantinische Herrschers hat diese Orte entstehen lassen, zugleich mit dem Befehl diese Teile der Wüste zu besiedeln.*«[56]

18 On November 16, he visited Mitzpe Shivta and reported on his observations in his diary (Fig. 7)[57], a letter to his wife[58], and in his later publications »Denkmalschutz und Kunstwissenschaftliche Arbeit während des Weltkrieges in Syrien, Palästina und Westarabien«[59] and »Sinai«[60]. Wiegand used the Arabic name of the place »*Mischrefe*«, commonly used by the local population in the region before and during World War I and mentioned by other visitors in varying transcriptions.[61]

19 Wiegand recognized the site's characteristics expressed in this designation, describing Mitzpe Shivta as »*einen Mustertypus eines großen befestigten frühbyzantinischen Militärstützpunktes mit Türmen und Kasematten* […], *Kommandantur und Kirche, ja sogar die Umrisse des Gartens* […] *liegen noch deutlich da.*«[62] He maintained this classification in later publications, identifying Mitzpe Shivta as a »*Wüstenburg*«[63], a »*frühbyzantinische Burg*«[64] and a strong »*Bollwerk*«[65] for the protection of the road between Gaza, Elusa and Aila. Noting that the plateau was fortified, Wiegand also observed a lower fortification 4 m below with caves, partly enclosed by walls.[66]

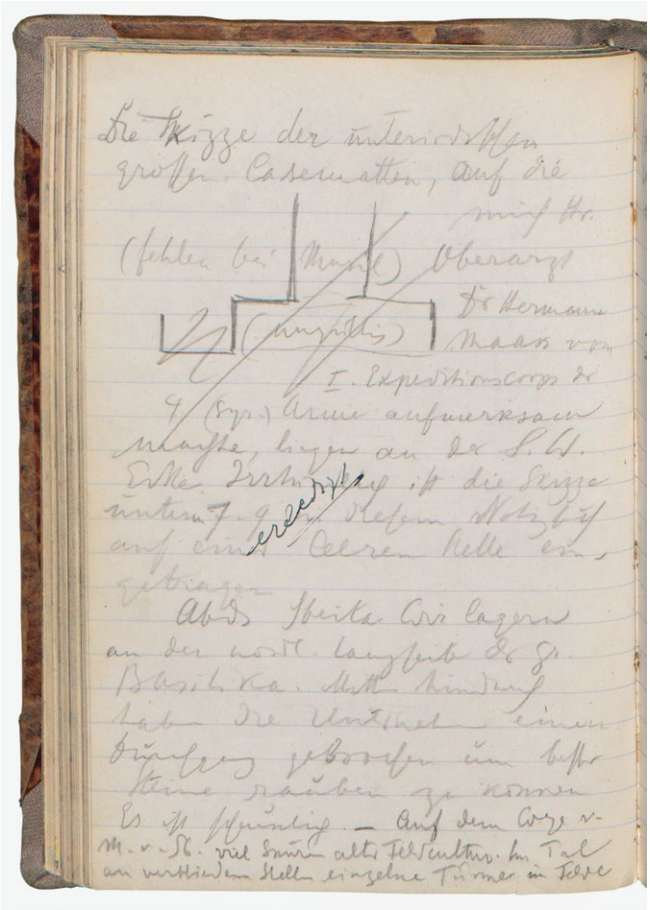

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Fig. 7: Excerpt from Theodor Wiegand's »Marschtagebuch« (4.10.1916–2.12.1916). It contains a total of 6 pages of notes and sketches about his visit to Mitzpe Shivta

54 Wiegand 1919, 174.
55 Lawrence – Woolley 1914.
56 Wiegand 1970, 206. Early Byzantine is not used here by Wiegand in the sense of the present local chronology in the Negev (see Heinzelmann et al. 2022, 253), but refers to Late Antiquity up to the conquest of the region by the Arabs in the 7th century C.E.
57 Deutsches Archäologisches Institut, DE DAI-Z-AdZ NL-WieT-00883, Diary entry of Theodor Wiegand, November 16, 1916.
58 Wiegand 1970, 206.
59 Wiegand 1919, 174.
60 Wiegand 1920, 65.
61 Palmer 1871: el-Meshrifeh; Musil 1907: el-Mešrefe; Lawrence – Woolley 1914: Mishrafa.
62 Wiegand 1970, 206.
63 Wiegand 1919, 174.
64 Wiegand 1920, 65.
65 Wiegand 1920, 118.
66 Wiegand 1920, 64.

20 Regarding the construction of the buildings, he noted that the walls were made of quarry stone with a clay bond, the outside of which was faced with ashlars: »*Sie bestehen aus Bruchstein mit Lehmverband, die Außenseiten sind mit Quadern verblendet*«[67]. Wiegand assumed the buildings were white, plastered with snow-white marl lime.[68] He also observed evidence of intensive cultivation around Mitzpe Shivta, noting numerous remnants of garden culture in the form of retaining walls, mounds, and elongated heaps of flint and pebbles, providing insight into intensive Late Antique agriculture.[69]

Demolitions in the Course of the Railway Construction

21 Despite Wiegand's enthusiasm for the fact that Mitzpe Shivta is not overbuilt by later occupation phases, he noted serious damage to its archaeology – especially to its towers. He linked the destruction to the construction of the railway between Beersheva and 'Auja al Hafir, which he emphasised was located in close proximity to the archaeological remains: »*die Bahnlinie* […] *führt nahe am Fuße des Berges vorbei*«[70]. He states that the archaeological material quarried here was used for the construction of »*Überführungen, Brücken und Stationshäusern*«[71].

22 For the destruction of the site he blamed Greek and Armenian contractors who were involved in the construction of the railway in the Negev: »[…] *Einblick in das Innere eines leider erst kurz vor unserem Besuch am 16. November 1916 durch den Bahnunternehmer Themistoklis und den Armenier Adji abgerissenen Turmes*«[72]. Already in his earlier letter, he named the railroad companies as the responsible parties: »*Aber die eigentliche Verwüstung ist doch erst den griechischen und armenischen Unternehmern vorbehalten geblieben, die in der Wüste die Bahn und die neuen Brunnen gebaut haben*«[73]. In the year 1916, systematic deportations and massacres of Greek and Armenian Christian minorities took place throughout the historic Armenian settlement areas within the Ottoman Empire, primarily in what is now southern and eastern Turkey, as well as northeastern Syria. Armenians who managed to escape settled in the Levant, where they were not necessarily persecuted. Wiegand's mention of their involvement in the construction of the railway should also be understood within this context.[74] Kreß von Kressenstein's diary highlights that the railway frequently faced disruptions due to a shortage of personnel, particularly skilled workers, including those from the Armenian community.[75]

23 Wiegand provides further generalized information on how the contractors dismantled ancient building materials and which parts of the buildings were particularly targeted: »*Mit Vorliebe haben diese Kerls die Ecken hochstehender Mauern herausgerissen, außerdem die Türen, so daß der übrige Teil der Mauer bald fallen muß. Ein solcher Unternehmer kam zu mir und sagte: Die Steine an den Ecken sind eben die besten, daher nehmen wir sie von dort mit Vorliebe. Natürlich spielt der Profit die Hauptrolle. Die antiken Steine sind handgerecht behauen und man spart an ihnen eben Arbeitslohn für Steinmetzen*«[76]. The contractors' specific interest in pre-hewn cornerstones and lintels, which eliminated the need for hiring stonemasons, underscores the prevalent financial considerations in the

67 Wiegand 1920, 65.
68 Wiegand 1920, 66.
69 Wiegand 1920, 62.
70 Wiegand 1920, 62.
71 Wiegand 1919, 175.
72 Wiegand 1920, 65.
73 Wiegand 1970, 206.
74 Altanian 2018; Kaiser 2018, 38 f.
75 Baumgart 2020, 462. 475.
76 Wiegand 1970, 206.

Negev railway construction. In contrast, Wiegand, as an archaeologist, highlighted the detrimental impact of extracting individual hewn stones on the stability and integrity of entire walls. While Wiegand did not provide a detailed account of the destruction caused by the railroad contractors in Mitzpe Shivta, he indicated that the southern towers were targeted as sources of construction materials. From his generalized descriptions of the contractors' quarrying practices, it can be inferred that cornerstones or lintels of the towers were among the primary focuses. During Wiegand's visit, at least one tower had been preserved to a height that allowed for the following description: »*An der Südseite sind Türme mit besonders gewaltigen Blöcken gebaut* […]. *Die Türme waren zweigeschossig, die Zwischenböden durch flache Steindecken hergestellt, die auf vorzüglich gearbeiteten Gurtbögen ruhten.* […] *man bemerkt ferner unterhalb des Bogens, in der nach Westen gerichteten Wand eine schmale Schießscharte*«[77]. The huge blocks of the towers described by Wiegand likely served as a valuable resource for the railway contractors. The towers on the southern side of Mitzpe Shivta, being in proximity to the railway line, were easily accessible and thus heavily impacted. Blocks dismantled from these towers could be effortlessly rolled down the steep southern slope and then transported on carts along the wadi beds to the construction sites.

Protection Measures

24 The stone extraction by railway contractors in the Negev did not escape the attention of the military leadership. Contractors responsible for the destruction of archaeological sites were apprehended by Colonel Bedjed Bey and subjected to court martial in Beersheva: »*Da einzelne Bauunternehmer begonnen hatten, von diesen Stätten Steine zum Bau von Überführungen, Brücken und Stationshäusern der neuen Wüstenbahn zu verschleppen, so wurden vom Kommandanten des Wüstenbezirks, Oberst Bedjedbey, strenge Verbote erwirkt, in deren Folge jeder Steinräuber nach Birseba eingeliefert und kriegsgerichtlich verurteilt wurde*«[78]. Nevertheless, the timeline of when the stone robbery came to light remains unclear. It is uncertain whether Wiegand's observations prompted this discovery or if individuals like Bedjed Bey actively advocated for the preservation of the sites already at an earlier stage. Kreß von Kressenstein's diary entries indicate that he personally lacked awareness of the Negev's archaeology and only developed a sensitivity towards it upon Wiegand's arrival at the Sinai front: »*Dank seinem* [Wiegand's] *großen geschichtlichen Wissen und seinen beruflichen Kenntnissen und Erfahrungen vermochte er die Trümmerfelder, durch die wir bisher achtlos geritten waren,* […] *zu neuem Leben zu erwecken. Ich sah die in früheren Jahrhunderten stark besiedelten Gegenden des südlichen Palästina und der Sinaiwüste mit ganz anderen Augen und mit ganz anderem Interesse* […]«[79]. Djemal Pasha, however, already held a strong interest in culture and architecture before encountering Wiegand.[80] In a later letter, he described his meeting with Wiegand as a happy coincidence that brought two like-minded people, interested in the preservation of monuments together.[81] Nonetheless, in his book he asserted that it was only after Wiegand's inspection trips in the Negev and other regions that he implemented measures to preserve archaeological sites.[82] Bedjed Bey's punishment of stone robbers in Beersheva, therefore, was likely a result of Wiegand's initiatives.

77 Wiegand 1920, 65.

78 Wiegand 1919, 175 f.

79 Kreß von Kressenstein 1938, 199.

80 See Willert 2021, 5.

81 Bayerisches Hauptstaatsarchiv, Abt. IV Kriegsarchiv, MKr. 1956: Letter of Djemal Pasha to Liman von Sanders, Damascus, February 10, 1917.

82 Pascha 1918.

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Fig. 8: Example of a German AEG C.IV reconnaissance aircraft with a camera fitted in the gunner's position

Fig. 9: German Lieutenant Richard Falke from Aviation Division 300 Pascha

Aerial Photography

25 A year after visiting Mitzpe Shivta and during his time at the Sinai Front, Theodor Wiegand recognized the significant potential of aerial photography (Fig. 8) for archaeological documentation.[83] On September 10, 1917, he initiated efforts to raise awareness among flying formations in the Near East about the value of capturing photographic images of ancient monuments. German Lieutenant Richard Falke (Fig. 9) from Aviation Division 300 Pascha produced aerial photographs of Mitzpe Shivta during this initiative.[84] These images, taken from varying heights (Fig. 10. 11), provide a comprehensive view of the entire archaeological site and its surrounding agricultural relics. They serve as invaluable sources for assessing Mitzpe Shivta's state of preservation shortly before the end of World War I, helping date subsequent destruction. Unfortunately, Wiegand's initiative came more than a year after the stone robbery, and the southern side of Mitzpe Shivta is overexposed in both aerial photographs, omitting areas where, according to Wiegand, the stone robbery occurred.

Key points from Wiegand's visit to Mitzpe Shivta include:

- Wiegand links Mitzpe Shivta seamlessly with other Byzantine settlements such as Oboda (Hebr.: Avdat, Arab.: Abde), Sobata (Hebr.; Shivta, Arab.: Subeita), Nessana (Hebr.: Nizzana, Arab.: Auja al Hafir), and Rehovot (Arab.: Khirbet Ruheibeh), perceiving them to share a common tradition.
- He particularly emphasizes the fortification aspect of the settlement, giving significant importance to the stone-built architectural elements.
- Ottoman-employed railroad contractors exploited archaeological sites for construction purposes.
- Towers on the southern side of Mitzpe Shivta, closest to the railway, were consequently destroyed.
- The primary focus was on extracting well-dressed cornerstones and lintels, leading to destabilization of the remaining structure.
- This exploitation aimed to avoid the necessity of hiring and paying stonemasons.

83 See Trümpler 2010, 475–483.

84 Wiegand 1920, 63. For more background on the flying formations see Schulz 2013.

10

Fig. 10: Top view of Mitzpe Shivta in east-west orientation, taken at an altitude of 1400 m

11

Fig. 11: Mitzpe Shivta in detailed perspective from an altitude of 700 m. The photograph was taken from the west looking east

- While Armenian and other Christian minorities were being persecuted in other parts of the Ottoman Empire in 1916, they contributed to the construction of the railway in the Negev.
- Wiegand's observations prompted measures by the Ottoman military to be taken against the destruction of archaeology.

Mitzpe Shivta in Historical Photographs (1869–1930)

26 Since 1869, explorers have captured selected archaeological sites in the Negev Desert, including early photographs of Mitzpe Shivta predating Wiegand's visit. The first images from 1869 by C. F. Tyrwhitt Drake and Edward Henry Palmer, along with those taken in 1914 by Lawrence and Woolley, depict the south side of the settlement hill. Post-Wiegand, H. D. Colt photographed specific structures of Mitzpe Shivta in the 1930s. Our comparative analysis of these photographs and modern drone footage traces the evolution of Mitzpe Shivta's architectural structures, focusing on identifying evidence of stone robbery during railroad construction and supplementing Wiegand's insights.

27 The comparative analysis in Fig. 12 affirms the loss of building substance on the south-eastern tower, consistent with Wiegand's description. Palmer's 1869 photograph shows two clearly distinguishable stories of the tower, which remained relatively unchanged in Lawrence and Woolley's 1914 image. In 2021, our survey reveals the removal of the tower down to the plateau level, confirming Wiegand's account of deliberate stone extraction. Photographs indicate the contractors targeted high-quality, dressed stones while leaving the building backfill (Fig. 13). This practice affected not only towers but also the massive retaining walls of Mitzpe Shivta's lower fortifications, supplementing Wiegand's observations. The comparison in Fig. 14 demonstrates the systematic dismantling of finely dressed ashlar blocks by the railroad companies and affirms Wiegand's account of the impact on various structures, validating his description of the southern tower's destruction and the deliberate removal of well-dressed ashlar blocks, not limited to towers but extending to other architectural elements on the south side closest to the railway. In the following decades, the connected loss of stability caused the retaining walls in the southern and eastern parts of Mitzpe Shivta to collapse as indicated by our 2021 drone footage (Fig. 12. 14).

The Stone-Built Features of the Railway Embankment

Bridges and Channels

28 In our examination of a 2.3 km segment of the Beersheva-Qusseima branch line closest to Mitzpe Shivta (Fig. 15), we systematically documented stone-built structures on the embankment, potentially representing the culmination points of materials extracted from the archaeological site. Despite a lack of published scholarly works on these bridges and channels, Eran Doron's 2012 survey, accessible on a private homepage, serves as a reference.[85] We provide Doron's numbering system for the structures in our documentation (e. g. No. 00) to facilitate cross-referencing. Utilizing Structure from Motion (SfM), drones, and cameras, we identified and documented seven stone-built structures in close proximity to Mitzpe Shivta. Our primary focus included analyzing the building materials, construction quality, and stylistic elements. Beginning our survey on the road to Sobata near the Shivta military base, we proceeded westward, tracing the embankment towards Nessana (Auja' al Hafir).

29 The route southeast of Mitzpe Shivta leading towards Nessana offers picturesque views, characterized by a well-preserved railway embankment interspersed with bridges and channels. This scenic arrangement is influenced by the proximity to the Mitzpe Shivta hill and the accompanying steep gradient.[86] Erosion channels, evi-

85 https://negevtrain.wordpress.com.

86 Ben-Yosef 2016, 168.

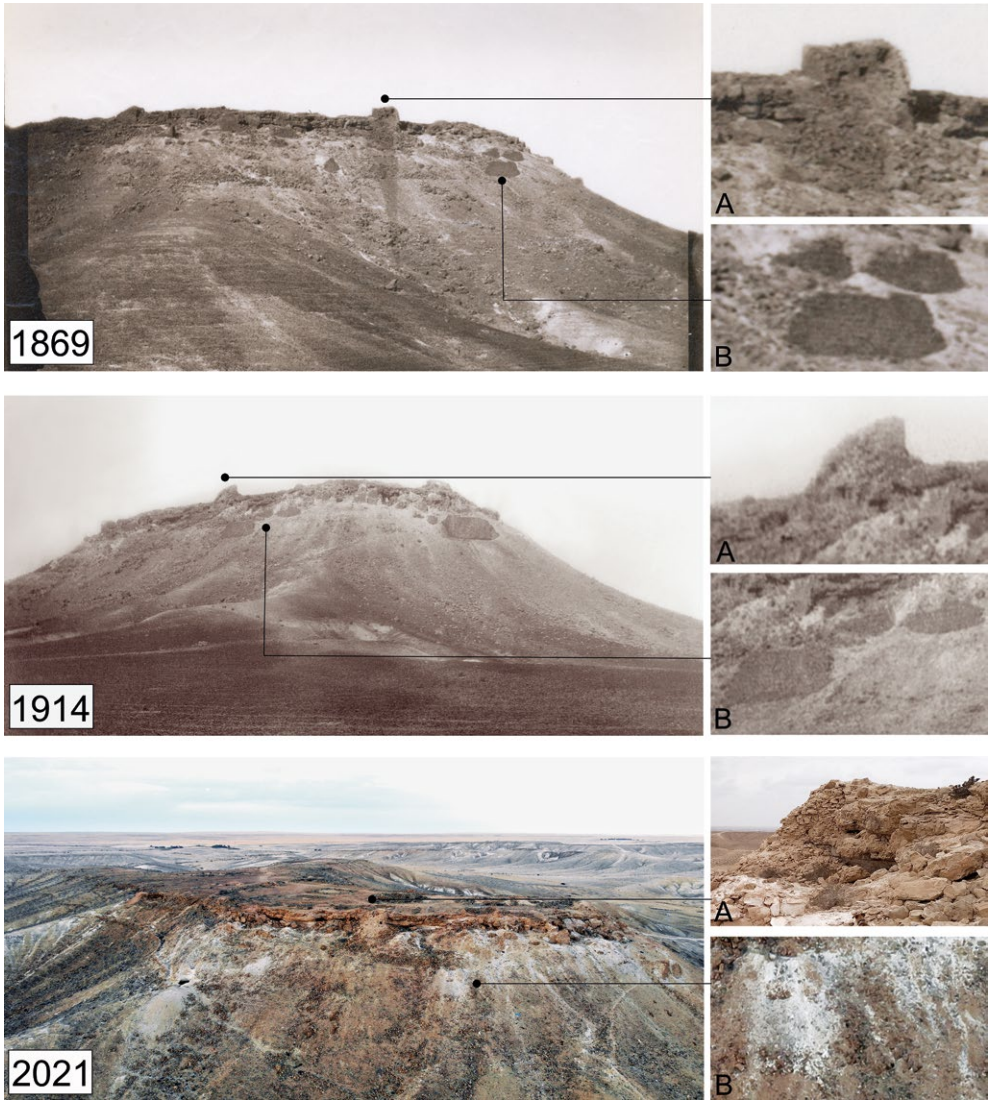

Fig. 12: 1869 photograph of Mitzpe Shivta by Edward H. Palmer and C. F. Tyrwhitt Drake captured from the south, featuring the southern tower (A) and retaining walls of the lower fortification (B). Lawrence and Woolley's image from 1914 exhibits the same structures from a slightly varied south-eastern perspective. The drone image from 2021 reveals the same structures in a ruined state

12

Fig. 13: Location of the ruined tower in relation to the railroad line 1 km away (A) and close-up of the tower with the ashlar shell dismantled (B)

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14

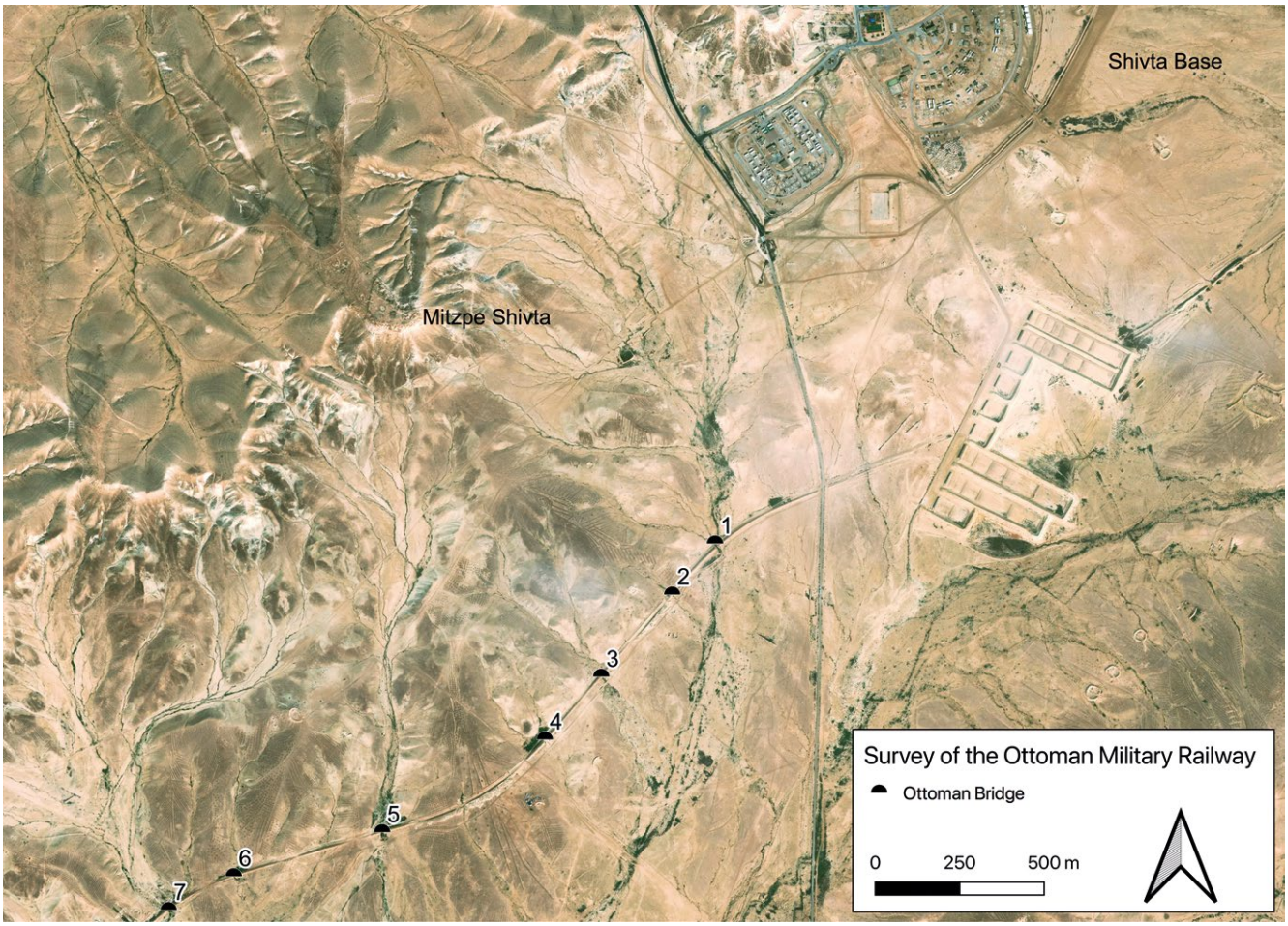
Fig. 14: Evolution of the south-eastern retaining wall of the lower fortification: In Lawrence and Woolley's photograph from 1914, the retaining wall is still depicted with its shell masonry in place. Harris D. Colt's photograph from the 1930s reveals that substantial portions of the outer masonry were removed, attributed to stone looting during the construction of the Ottoman Railroad. In 2021, the structure had collapsed at these weakened points

dent through vibrant vegetation concentrations, have been carved by rainwater runoff, necessitating the installation of structures to prevent embankment washouts during heavy rains – a phenomenon observed at other points along the Ottoman Military Railway.[87] Passage sizes vary based on wadi dimensions and the associated volume of drainage water, resulting in the construction of either low channels or larger one- or two-arched bridges.

30 The initial structure is a single-arched bridge (OB 001, No. 72; Fig. 16). Currently, the run-off no longer flows through the bridge; instead, it has forged a path alongside the remnants to the southwest. Unfortunately, the bridge has collapsed, yet portions of the internal structure and the wing walls remain intact. The masonry of both the vault and the wing walls exhibits precise squared edges, except for the exposed face of the stones, deliberately textured with a rough, patterned surface. While the wing walls' stones display an air cushion-like curvature, the blocks forming the bridge arch are hewn straight. Their edges are smoothed, with a deliberate rough surface at the center of each stone.

31 The second structure is a shallow channel, half a meter in height and width (OB 002, No. 71; Fig. 17). Unlike the first bridge, this channel lacks a vault and is covered by straightforward stone slabs. The slabs exhibit a polished surface with distinct chisel

87 Baumgart 2020, 492. 510 f.



15

Fig. 15: Survey area and identification of the documented bridges and channels along the remains of the Ottoman railroad

marks. The traces of different stonemason tools are visible here. Similar to OB 001, the wing walls of the channel consist of carefully dressed blocks. Both entrances are damaged.

32 The subsequent structure (OB 003, No. 70; Fig. 17) combines features of both OB 001 and OB 002. This construction is entirely intact, resembling an elongated and narrow channel sealed by a vault, approximately 1.50 m in height. The blocks are meticulously cut, fitting seamlessly without gaps in the joints. Notably, the keystones of the wing walls display fine finishing and smooth surfaces, again revealing the use of various chisel types.

33 OB 004 (No. 67; Fig. 18) represents a broad passage in the dam, likely associated with the IDF's (Israel Defence Forces) use of the area around Sobata as a military training ground. Initially, no apparent traces of a bridge or channel were discernible. Upon closer inspection, remnants of stone foundations on the passage floor became visible, suggesting a bridge structure with an arch. The intriguing aspect of this passage lies in the remnants of wood observed on the southwest side of the structure (Fig. 18). These weathered fragments, likely positioned lengthwise at the embankment's base, are noticeably degraded and situated in the interface between the dam and the backfill of the southwestern vault wall.

34 The passage OB 005 (No. 66; Fig. 18) represents another structurally intricate construction. Although the upper section has collapsed, the extant elements suggest a bridge comprised of two arches and corresponding side wings. Similar to OB 001, the exposed blocks of the structure exhibit a somewhat coarse exterior dressing, yet the contact surfaces are meticulously worked to eliminate visible gaps between the blocks.

16

Fig. 16: Destroyed Ottoman bridge OB001

35 Culvert OB 006 (No. 65; Fig. 17) is exceptionally well-preserved, bearing the closest resemblance to OB 002 in its construction. Standing at approximately 1 m in height, equivalent to three layers of blocks, the upper section of the channel is composed of flat slabs, akin to the design of OB 002. While the exterior face of the blocks exhibits rough workmanship, the contact surfaces are meticulously smoothed. Similarly, the elements defining the upper edges of the side wings showcase a superior level of finishing.

36 The final culvert in our documentation (OB 007; No. 64; Fig. 19) is a double-arched bridge, nearly fully intact on its south-eastern side, with minor signs of damage visible on the opposite northern façade. The exterior surface of the arches features blocks in the Bossage style, also known as Rustication, which lends the structure a distinctive aesthetic charm. The inclusion of a small drainage outlet between the arches enhances this visual appeal. Once more, both the shell of the side wings and the keystones of the bridge exhibit meticulous craftsmanship (https://arachne.dainst.org/entity/7467699).

Our survey of the bridges yielded several insights:

- Topography played a crucial role in determining the placement of passages within the embankment.
- The size of the wadis influenced the choice between small channels and larger, sometimes multi-arched bridges.
- Despite the time constraints evident in the railway's construction, aesthetic considerations were not disregarded (Fig. 20). Architectural elements, such as the Bossage technique[88] on the arches (OB 007), were employed for their visual impact. This Rustication style, commonly found in military structures like forts and castles, conveys a sense of power and strength. Despite its seemingly simplistic appearance, the method demands skilled stonemasons to achieve a coarse finish.
- Additional aesthetic features include the meticulously smoothed keystones of the bridges and side wings, showcasing traces of various stonemason tools. Notably, a block from OB 005 reveals intricate craftsmanship, merging distinct styles of the vault and side wings within a single stone.
- Contrary to Wiegand's claim that the quarrying of ancient stones by railway contractors aimed to save on personnel and salaries, the bridges provide evidence of the work of highly skilled stonemasons.

88 Bragard 1999.

17

18

Fig. 17: Examples of small channels: OB002 (top), OB003 (middle) and OB006 (bottom)

Fig. 18: Remains of wood construction at OB004

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20

Fig. 19: Ottoman bridge OB007 showing arches made of Bossage masonry

Fig. 20: Aesthetic features on the bridges with the waterspout (A), the finishing of a single stone in two different styles (B), the Bossage technique applied on the arches (A & C) and the smoothed endstones of the wingwalls

Archaeological Evidence for the Removal of Building Material in Mitzpe Shivta

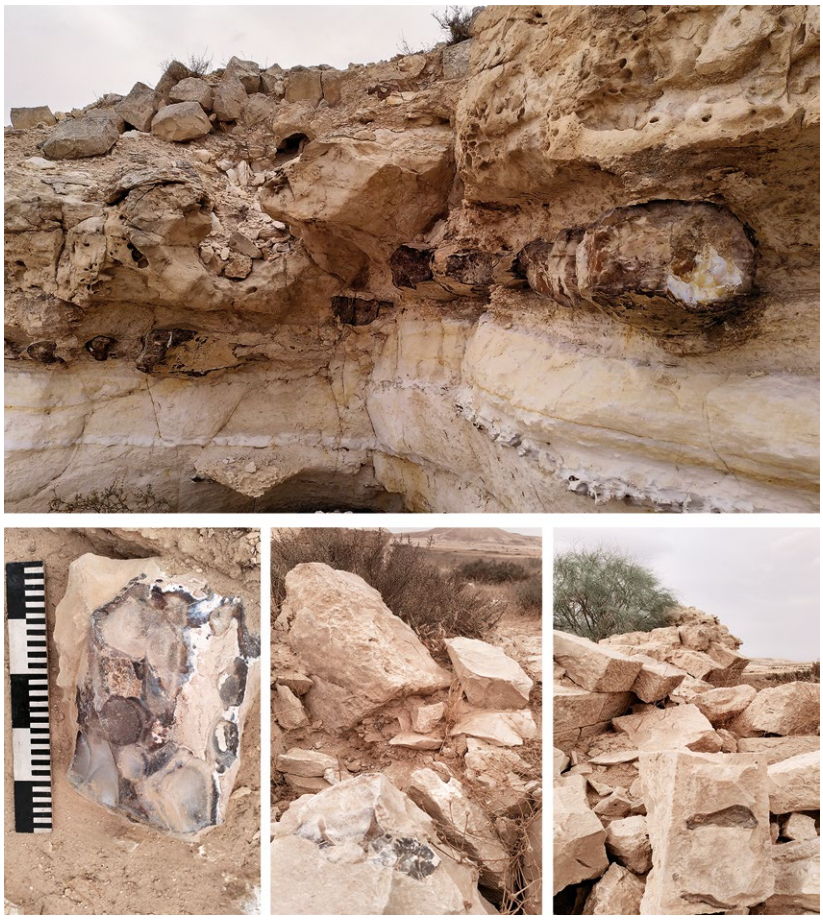
37 The presented written evidence unequivocally establishes that building material sourced from the Byzantine settlement of Mitzpe Shivta was repurposed for construction, likely contributing to the creation of the Ottoman passages detailed above. However, a direct association between the archaeological material from Mitzpe Shivta and the Ottoman bridges and channels immediately fronting the site remains unestablished, given Wiegand's lack of specificity regarding the ultimate destination of the extracted material. Thus, materials may also have been sourced from other nearby Byzantine sites, such as Nessana and Elusa, for the construction of the bridges fronting Mitzpe Shivta. To bridge this gap, we conducted an analysis of the geological attributes of the blocks used in constructing the Ottoman passages closest to Mitzpe Shivta, comparing them with *in situ* ashlars from the site and the natural outcrop of the Mitzpe Shivta hill.

38 Mitzpe Shivta forms part of the Nizzana formation, originating in the Tertiary period (66–2.6 million years ago).[89] This formation comprises chalkstone with a white-yellowish hue, contributing to the site's table mountain morphology, fortifying its character, and enabling the construction of rock-cut rooms. Notably, flint inclusions of significant size within the Nizzana formation, observed at Mitzpe Shivta (Fig. 21), render the site appealing for prehistoric activities, as evidenced by finds of numerous chisels and tools spanning the Middle Palaeolithic to later periods across the plateau. This clearly distinguishes Mitzpe Shivta from the surrounding geology, which is rather poor in flint inclusions and belongs to the Taqiye Formation.

39 A distinctive trait of the Byzantine-era ashlar stones in Mitzpe Shivta involves frequent inclusions of this flintstone, indicating that the inhabitants both quarried and utilized on-site materials for construction (Fig. 19). A comparative examination of *in situ* ashlars from Mitzpe Shivta and the material used in the construction of the Ottoman passages reveals a correlation, with both exhibiting identical flint inclusions (Fig. 19).

89 Ben-Yosef 2016, 167.

Conclusion



21

Fig. 21: Raw material provenience: Silex nodules in lime stone rock of Mitzpe Shivta (A), Block with massive silex inclusions from excavation Mitzpe Shivta (B), Blocks with silex inclusions from the Ottoman Railway (C & D)

40 Mitzpe Shivta, along with other Negev sites, endured significant damage through stone robbery during the construction of the Ottoman Military Railway in Palestine between 1915 and 1916. Among Byzantine sites in the Negev[90], Mitzpe Shivta together with Nessana, being the closest to the railway line, faced the brunt of this exploitation. The financial strains on the Ottoman Empire during World War I, coupled with semi-autonomous railway contractors, incentivized the extraction of archaeological material for building railway bridges and channels. Emphasis was placed on utilizing well-dressed stones, as the stone robbers found them on the towers and retaining walls of Mitzpe Shivta. The disassembly of such stabilizing shell masonry exacerbated further structural degradation in the post-war decades, evident in historical photographs and contemporary drone images. Despite the intended resource-saving nature of stone mining at archaeological sites, our examination of bridges and channels reveals that meticulous craftsmanship by skilled stonemasons was applied on the archaeological material, including the Bossage-Style technique.

41 Notably, a shift in the perception of the archaeology of the Negev region became apparent following Wiegand's arrival on the Sinai-front. His influence heightened awareness of archaeological value and protection, particularly among the military leadership he engaged with, namely Kreß von Kressenstein, Djemal Pasha and Bedjed Bey. The latter introduced legal measures to protect archaeology in the Negev during the war. Wiegand's archaeological knowledge, paired with the increased use of airplanes as weapons during World War I, resulted in the first aerial photographs of Mitzpe Shivta and other sites. These photographs continue to hold significant value for present-day research.

42 The stone robbery and subsequent loss of structural preservation and visibility have had profound and enduring consequences for the understanding and exploration of Mitzpe Shivta. While Wiegand initially grouped Mitzpe Shivta with the other Byzantine sites like Nessana, Rehovot, and Oboda, emphasizing its fortification features, the perception of the site evolved towards a focus on its rock-hewn rooms. After 1956, Mitzpe Shivta lagged behind other Negev sites in terms of research, public awareness, and preservation. Settlements like Elusa, Oboda, Nessana, Mampsis, and the nearby Sobata underwent extensive research[91], leading to their declaration as national parks and recognition as the UNESCO World Heritage *Incense Route – Desert Cities in the Negev*. Mitzpe Shivta, situated within an IDF (Israel Defence Forces) artillery training

90 Lawrence – Woolley 1914; Wiegand 1970, 206; Erickson-Gini – Oach 2019, 9; Heinzelmann et al. 2022, 242.

91 i. a. Negev 1963; Negev 1988; Negev 1997; Mayerson 1962; Mayerson 1983; Kraemer 1958; Glueck 1959; Evenari et al. 1961.

area, however, faced ongoing threats of destruction and unauthorized access by looters. One reason for this may well be the loss of visibility due to the stone robbery along the railroad, as well as the subsequent further decay of buildings.

Supplementary Material

43 For a Structure from Motion model of the double-arched bridge (OB 007; No. 64) see: https://doi.org/10.34780/wep9vr87

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44 We would like to thank Sabine Thänert from the German Archaeological Institute, who made the aerial photographs and the diary from Wiegand's estate available to us. Felicity Cobbing and Ava Clark assisted with material from the Palestine Exploration Fund. Arne Schröder and Christian Schöne we thank for providing drone footage of the site. Noam Schmerler and Catalina Sobrino Figaredo helped with documentation in the field. Further acknowledgements go to the School of Archaeology and Maritime Cultures (University of Haifa), the Minerva Stiftung für die Forschung (Max-Planck-Gesellschaft), as well as the Gerda Henkel Stiftung for supporting the project. This research was conducted under the license of the Israel Antiquities Authority (G-73-2023; G-69-2022).

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Fig. 13: Jörg Linstädter
Fig. 14: Thomas Edward Lawrence and Leonard Woolley (PEF-P-WL-27), Harris D. Colt (UCLCA/ IA/A/14), Arne Schröder, Sina Lehnig
Fig. 15: Sina Lehnig
Fig. 16: Jörg Linstädter
Fig. 17: Jörg Linstädter
Fig. 18: Jörg Linstädter
Fig. 19: Jörg Linstädter
Fig. 20: Jörg Linstädter
Fig. 21: Jörg Linstädter

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