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## Trade routes to Hatra according to evidence from ancient sources and modern satellite imagery

### I INTRODUCTION

One of the constituent aspects of ancient Near Eastern history is the interaction of nomadic and sedentary communities. Of particular interest in this respect is the emergence of political entities of mainly nomadic Arab tribesmen on the border between the Roman and Arsacid (Parthian) empires in the first to third century A.D. Although their individual histories differ in various ways, they all focus on permanently settled and increasingly prosperous political capitals built at the margins of arable lands or in oasis. To some extent the cities of Palmyra, Hatra, or Hira and their respective political influences were the result of tribal confederacies vis-à-vis imperial powers<sup>1</sup>. The rise of Palmyra, in particular, can be ascribed to her role in international trade as emporium on the fringes of the Roman Empire. The riches acquired in the oasis of Tadmor in the Syrian desert clearly depended on the intensification of exchange and Palmyra's, at times, seemingly paramount position in overland caravan trade between the shores of the Persian/Arabian Gulf and the Roman Empire<sup>2</sup>.

In several aspects the situation of Palmyra seems comparable to Hatra. Both formed at places on the fringes of the steppe with some ecological advantages for settlement. Furthermore, both developed as major centers from tribal origins in a nomadic environment. They also became centers of political administration in regions where the influence and military prowess of the world powers of their time, the Roman and Arsacid empires, met with the marginal lands used mainly by nomadic

<sup>1</sup> On Palmyra see the summaries of Drijvers 1977, 837–857; Starcky – Gawlikowski 1985; Schmidt-Colinet 1995; for Seleucid Palmyra see now Schmidt-Colinet – As'ad 2002; the third century A.D. developments are extensively discussed by Hartmann 2001, cf. Hauser 2004; on Hatra see the summary by Hauser 1998; on the Lakhmid capital Hira see Shahid 1971.

<sup>2</sup> See Teixidor 1984; the contributions in Palmyra and the Silk Road 1992; Schuol 2000, 381–387.

pastoralists. Like Palmyra, Hatra gained importance and acquired wealth during the first and particularly the second and early third century A.D. The role of Hatra in long-distance trade, on the other hand, remains largely unknown and led to controversial interpretation. Safar and Mustafa assumed that long-distance trade played a vital role in the foundation and enlargement of the city<sup>3</sup>. Their argument by and large rests on the city's location and three statues of men in rich costumes of riders carrying purses comparable to examples from Palmyra<sup>4</sup>. Ibrahim, on the contrary, correctly observed that none of the Hatrean inscriptions report on caravans, although a custom house might be mentioned in an Hatrean inscription (no. 207<sup>5</sup>). He, therefore, concluded: "Trade never seems to have been a very significant factor in [Hatra's] history"<sup>6</sup>. More recently a different opinion was voiced by Freyberger and Hauser who considered the revenue from long-distance trade as important factor in the city's history<sup>7</sup>.

This article attempts to take up the debate and to present evidence for Hatra's role as an important meeting point of trade routes crossing the eastern Jazira in combining information derived from two very different sources. One is the Tabula Peutingeriana, a medieval copy of a Roman route map, the other is modern satellite imagery. Interpreting the evidence from these two sources, we will advance the idea that trade might have been an important factor for nomads to settle in Hatra. This is important not only from a methodological point of view, demonstrating the possibilities that satellite images offer, but also for historical topography and for the understanding of Hatra's role as a zone of interaction between nomadic and sedentary peoples.

## II CORONA IMAGES AND ANCIENT ROUTES

CORONA satellite images from the 1960s and 1970s have now become standard tools in studying the archaeological landscape. The greatest benefit of this satellite system is that it provides a window into how the landscape in question appeared before significant development occurred over the last thirty years and altered much of the Near Eastern landscape. The high resolution (2–3 meters) of the KH4 cameras in these satellites produced imagery that can detect many archaeological sites and features<sup>8</sup>. Among the archaeological benefits is that this system has proven very significant in finding hollow ways<sup>9</sup>.

<sup>3</sup> Safar – Mustafa 1974, 26.

<sup>4</sup> Safar – Mustafa 1974, 89–91 Pl. 44–46.

<sup>5</sup> Ibrahim 1986, 138. 211.

<sup>6</sup> Ibrahim 1986, 140.

<sup>7</sup> Freyberger 1998, 101–102; Hauser 2000, 193–194.

<sup>8</sup> Kouchoukos 2001, 80–83.

<sup>9</sup> Ur 2002, 80; Altaweel 2004.



Fig. 1. CORONA December 6, 1969 image showing some hollow ways (dark linear features) indicated by black arrows. Hatra's city gates are indicated by black squares.

شكل ١: CORONA ٦ كانون الأول ١٩٦٩، صورة تظهر بعض الطرق الغائبة (الخطوط الغائبة) المشار إليها بسهام سوداء، وتحدد المربعات السوداء بوابات مدينة الحضر.

Hollow ways are linear depressions that have been shown to be remnants of ancient roadways<sup>10</sup>. These hollows are shallow depressions originally created by significant human and animal traffic over an extended period, sometimes spanning several centuries or millennia<sup>11</sup>. Gullying and erosional processes further contributed to the creation of these features, making them even more differentiated from the surrounding area. Nevertheless, their origin as ancient paths is indicated by their straight trajectories crossing hills and wadis without regard to elevation<sup>12</sup>.

Studies have shown that ancient roadways connected contemporary sites and presumably the agricultural fields associated with those sites<sup>13</sup>. Linear hollows (another way to refer to hollow ways) can be seen in many parts of the Jazira of northern Iraq and Syria. The area of Hatra is no exception to this.

At Hatra, hollow ways can be seen leading exactly into known gates, helping to prove that linear hollows (as identified on satellite imagery) are in fact remnants of ancient roads (Fig. 1). In the following analyses, observed linear routes similar to those in Figure 1 will be traced using different sets of CORONA imagery. Overall, many linear hollows can be seen; however, only the hollow ways related to Hatra will be shown and discussed in the following figures. Given this brief discussion on hollow ways, one can conclude that these ancient routes provide us a window into ancient transportation systems.

Looking at Figure 2, we can discern a number of short and long-distance routes radiating from Hatra. Various short-distance roads connected Hatra with neighbouring sites, little villages or even hamlets on minor wadis along with their agricultural fields<sup>14</sup>. Sites like Tell Dibshiya (Fig. 2)<sup>15</sup> could be examples of small contemporary villages supplying Hatra with vital goods. A detailed interpretation of the vicinity of Hatra will yield interesting information on the city's subsistence and military defense system. This article, however, concentrates on long-distance routes that connected ancient cities and their regions<sup>16</sup>.

### III LONG-DISTANCE ROUTES

Satellite imagery presented here, along with historical evidence presented later, show that long-distance routes played an important role in Hatra's history. Looking at Figure 2, one can see several Arsacid (Parthian) period sites connected by ancient routes to Hatra. Six main routes are visible that extend more than 30 kilometers. These routes will be the focus of the following discussion.

The first route to be mentioned in Figure 2 is the road between Hatra and Assur. Although Assur is mostly known for its earlier Assyrian occupation, its importance in the Arsacid period is archaeologically well-attested<sup>17</sup>. Many of Assur's roads appear to have been important during the Assyrian occupation, but the Hatra–Assur road indicates that long-distance routes remained important to Assur and Hatra well after the Neo-Assyrian period<sup>18</sup>. The presence of this route indicates that traffic between these two cities would have been relatively common, suggesting a strong economic relationship.

Linear routes leading south from Assur crossing the Jebel Makhul at a small gap, which probably date to several different periods, seem to almost merge into a route that comes from Hatra (Fig. 2). This particular route can be seen heading in a general southeast direction from Hatra skirting the western flank of the Jebel Makhul towards the Tigris. As the route approaches the river, it begins to go in a more southern direction, and probably connected far-away Tekrit and Ctesiphon, both important Arsacid and later Sasanian centers. This southeastern route went through Tell Jedaydah, a site with Arsacid period remains<sup>19</sup>. Figure 3 shows a CORONA image of Tell Jedaydah and the hollow way route leading to this place.

Two nearly parallel routes follow the western bank of the Wadi Tharthar to the southeast from Hatra (Fig. 2). At least one appears to have a trajectory towards Tell Ajri, a large site occupied in the Seleucid and Arsacid periods, although this route fades from clear visibility before it reaches Tell Ajri itself<sup>20</sup>. This site has been proposed to be on a route connecting Tekrit and Hatra, and the trajectory of the visible route may support this view<sup>21</sup>. Nevertheless, the lack of imagery-based evidence cannot prove this beyond a reasonable doubt.

Another clearly identifiable route leads from Hatra west towards the Sabkha Al-Milh Al-Ashqar (area indicated by the number 1 in Figure 2). Modern dirt roads near this sabkha (salt-flat) can be seen leading towards the Euphrates; however, at the

<sup>10</sup> Wilkinson – Tucker 1995, 24–28.

<sup>11</sup> Wilkinson 1993, 556–557.

<sup>12</sup> Wilkinson – Tucker 1995, 25.

<sup>13</sup> Wilkinson 1993, 552, 559.

<sup>14</sup> In general the routes seem to correspond with sites mentioned in vicinity of Hatra by Ibrahim 1986. This will be studied in detail at another occasion.

<sup>15</sup> Ibrahim 1986, 43 no. 4.

<sup>16</sup> See Altaweel 2004 on Assur and its routes.

<sup>17</sup> Andrae 1977, 249–270; Hauser 1994; Hauser 1996, 57–65; Miglus 1996, 65–70; Hauser forthcoming b.

<sup>18</sup> Altaweel 2004.

<sup>19</sup> Ibrahim 1986, 54 no. 81.

<sup>20</sup> Ibrahim 1986, 55 no. 84.

<sup>21</sup> Safar – Mustafa 1974, 19; Hauser 1995, 232–233; see discussion below.

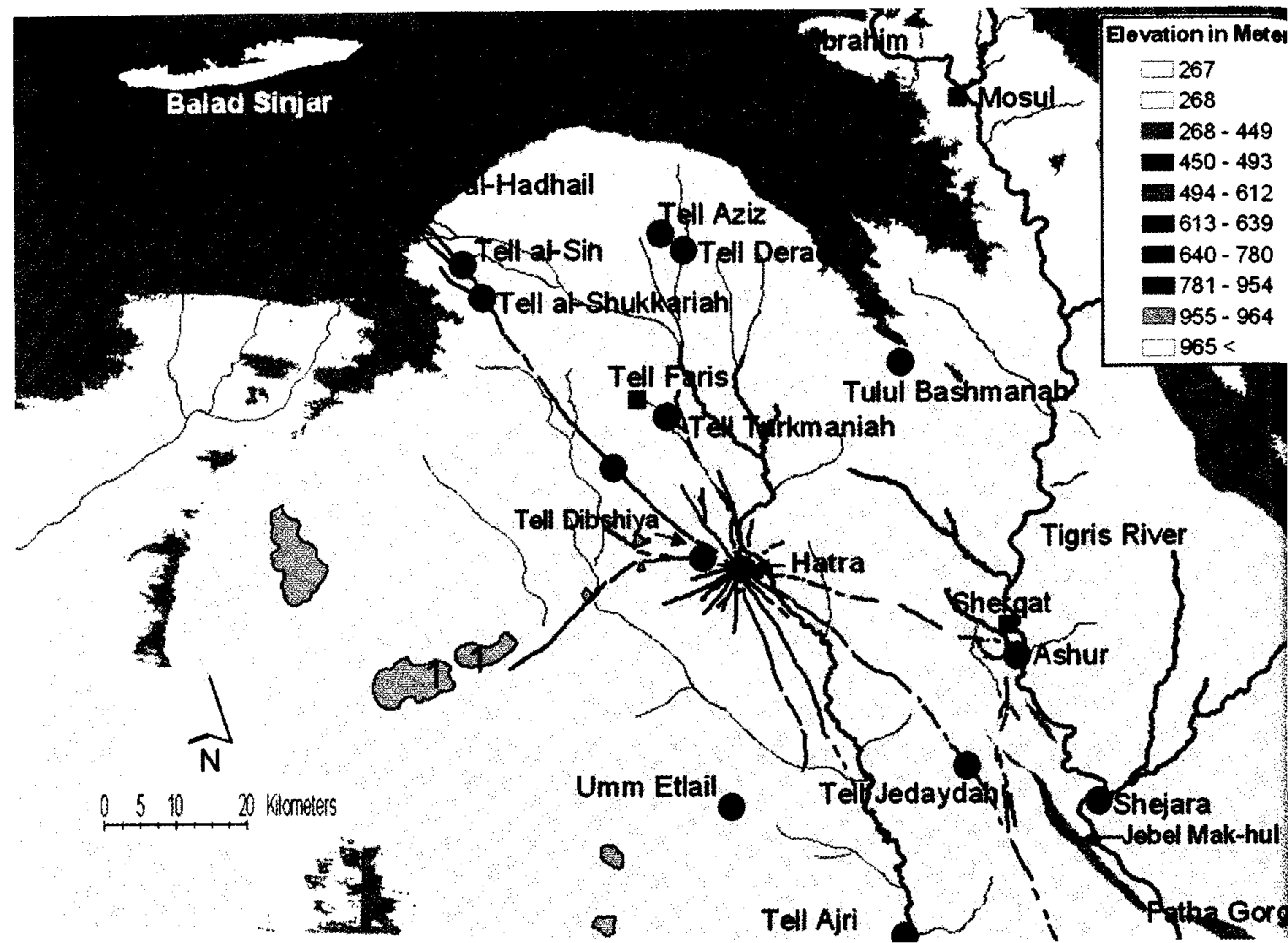


Fig. 2. Map made from December 6, 1969 and August 16, 1968 CORONA images. Black circles indicate archaeological sites, while squares represent modern towns and black lines observed hollow ways.

شكل ٢: خريطة منقّدة بتاريخ ٦ كانون الأول ١٩٦٩ و ١٦ آب ١٩٦٨، صور CORONA. تدل الدوائر السوداء على المواقع الأثرية، في حين تعين المربعات البلدات الحديثة وتشير الخطوط السوداء إلى الطرق الغائرة.

present the ancient route cannot be traced further than what is shown. Perhaps with further imagery one may find that the ancient route from Hatra continues, possibly towards the Euphrates and/or 'Ana, also a significant town in the Arsacid period<sup>22</sup>.

Turning to the northwest of Hatra, linear hollows can be seen connecting this city with Balad Sinjar via several sites (Fig. 2). Particularly well-preserved is a route which leaves Hatra in a nearly straight northwestern direction. It follows the flat plain and avoids the major wadi beds, traversing only a few minor wadis on its way towards Tell al-Hadhail, which is seen on Figure 4. The size of this site (almost 1 km long) and the road systems around it indicate that this ancient town would have been a regionally important town in at least one of its periods of occupation, in which the Arsacid and Sasanian were prominent<sup>23</sup>. A route leading to this tell could indicate that the ancient

<sup>22</sup> Northedge *et al.* 1988; Gawlikowski 1988.

<sup>23</sup> Ibrahim 1986, 72 no. 205.



Fig. 3. CORONA December 6, 1969 image showing the area just to the northwest of Tell Jedaydah (shown as a black circle). A hollow way route, indicated by the black arrows, can be seen leading to Tell Jedaydah (white arrow indicates north).

شكل ٣: CORONA ٦ كانون الأول ١٩٦٩، صورة تظهر المنطقة الواقعة مباشرة إلى الشمال الغربي من تل جديدة المحدد بالدائرة السوداء. وتمكن ملاحظة طريق غائر يقود إلى تل جديدة قد أشير إليه بأسمه سوداء (يشير السهم الأبيض إلى الشمال).

settlement was a significant stop along the route connecting Hatra with Balad Sinjar. There are several sites tangent to the route between Hatra and Tell al-Hadhail, among them Tell al-Shukkariah and Tell al-Sin<sup>24</sup>. Other sites, without known names, can also be observed on CORONA imagery to be near or on this route.

<sup>24</sup> Ibrahim 1986, 71 no. 195.

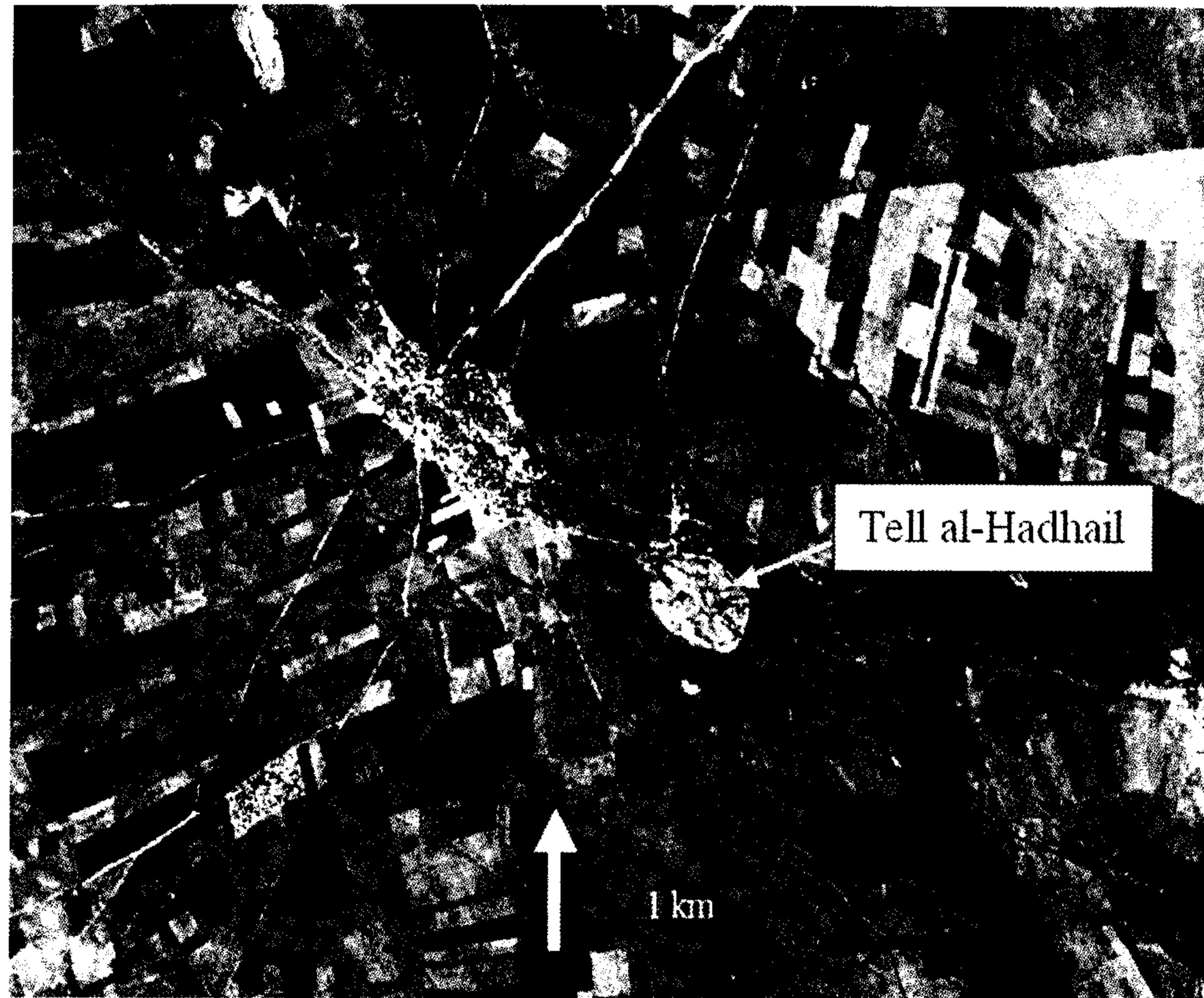


Fig. 4. CORONA December 6, 1969 image of Tell al-Hadhail and its surrounding area. Linear hollows from this site connected Hatra to the southeast and Balad Sinjar to the northwest. Some of these routes are indicated by the black arrows (white arrow indicates north).

شكل ٤: صورة CORONA ٦ كانون الأول ١٩٦٩، صورة لقل الحضيل والمنطقة المحيطة به. التجويفات المستقيمة كانت تصل هذا الموقع بالحضر من الجنوب الشرقي وبلد سنجانر من الشمال الغربي. وتدلل السهام السوداء على بعض هذه الطرق (يشير السهم الأبيض إلى الشمال).

The region of Tell al-Hadhail is significantly wetter, both in the present day and in antiquity, than the area of Hatra. While Hatra averages less than 200 mm of precipitation per year, the area of Tell al-Hadhail receives an annual precipitation of approximately 300–400 mm. It, therefore, offers sufficient opportunities for agriculture and is situated north of the approximate southern limit of the dry-farming zone as established by UNESCO in 1975. Not surprisingly, a large number of sites, as well as hollow ways, can be observed in this area. Many of these hollow ways can date to various periods, and some of the ancient roads were probably used for several centuries or even millennia, as mentioned earlier. The different routes present on imagery between

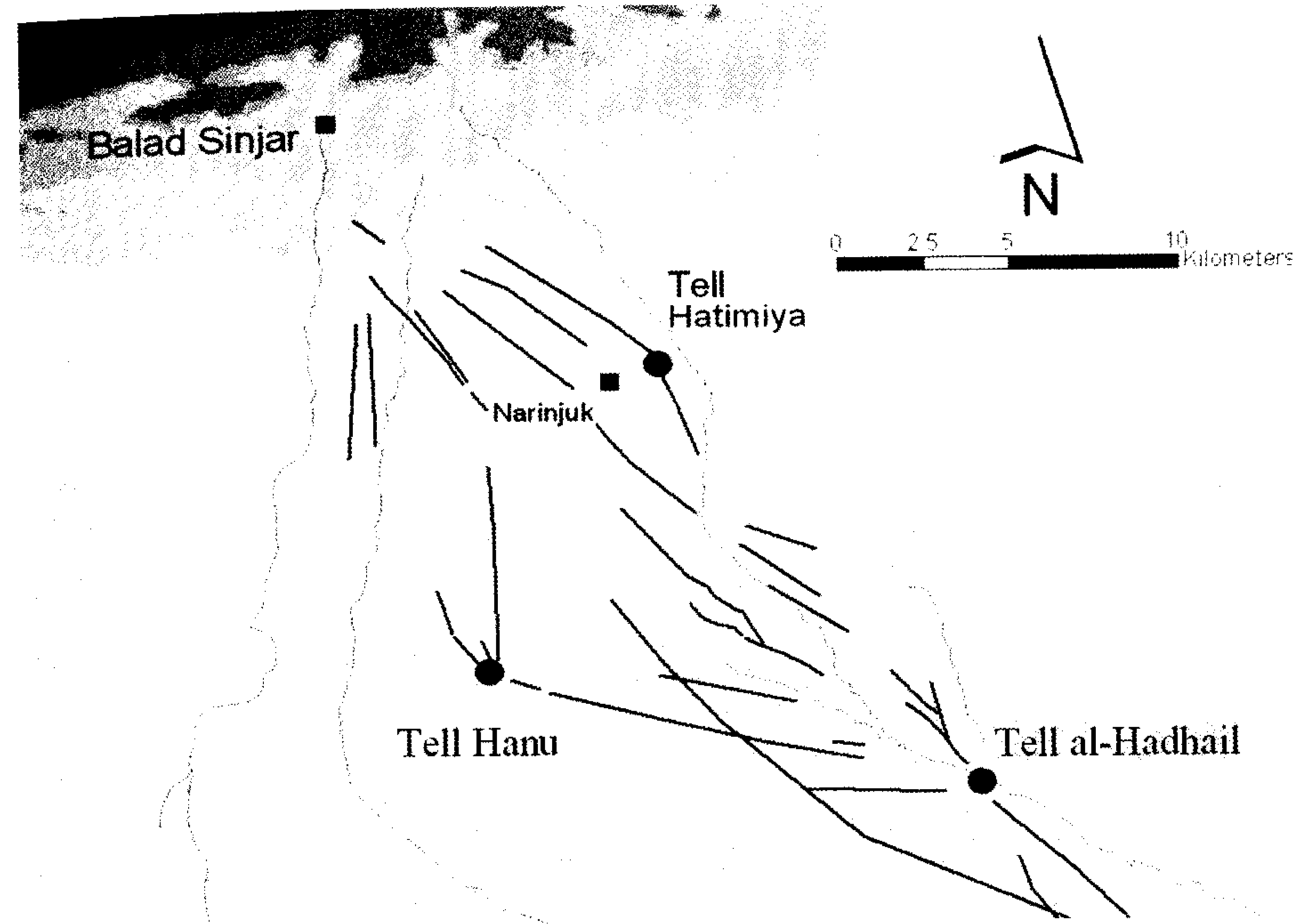


Fig. 5. CORONA derived image taken on December 6, 1969 and showing the area of Balad Sinjar. Hollow ways are marked as black lines, while tells are dark circles, and dark squares represent modern villages and towns.

شكل ٥: صورة CORONA مشتقة اتخذت بتاريخ ٦ كانون الأول ١٩٦٩ وتظهر منطقة بلد سنجانر. حُددت الطرق العائرة بخطوط سوداء، في حين حُددت التلال بدوائر غامقة، أما المربعات الغامقة فتدل على البلدات والقرى الحديثة.

Tell al-Hadhail and Balad Sinjar could also confuse the search for specific routes linking those two sites, thus several possible routes need to be followed and traced in this analysis. Routes that do not connect Balad Sinjar and Tell al-Hadhail, or sites in between, can be eliminated while the converse can be traced as possible routes.

With that in mind, the area of Balad Sinjar south to Tell al-Hadhail shows at least a couple of routes that may have connected these two towns (Fig. 5). One possible route directly links these sites, with the area of Tell Hatimiya and the modern town of Narinjuk located in between. A second possible route could be via Tell Hanu (Fig. 5), a Sasanian period site located about 13 kilometers northwest of Tell al-Hadhail, before reaching Balad Sinjar<sup>25</sup>. Unfortunately, the linear hollows from Tell Hanu towards Balad Sinjar are not very well preserved, although based on the trajectory of some of

<sup>25</sup> Ibrahim 1986, 76 no. 229.

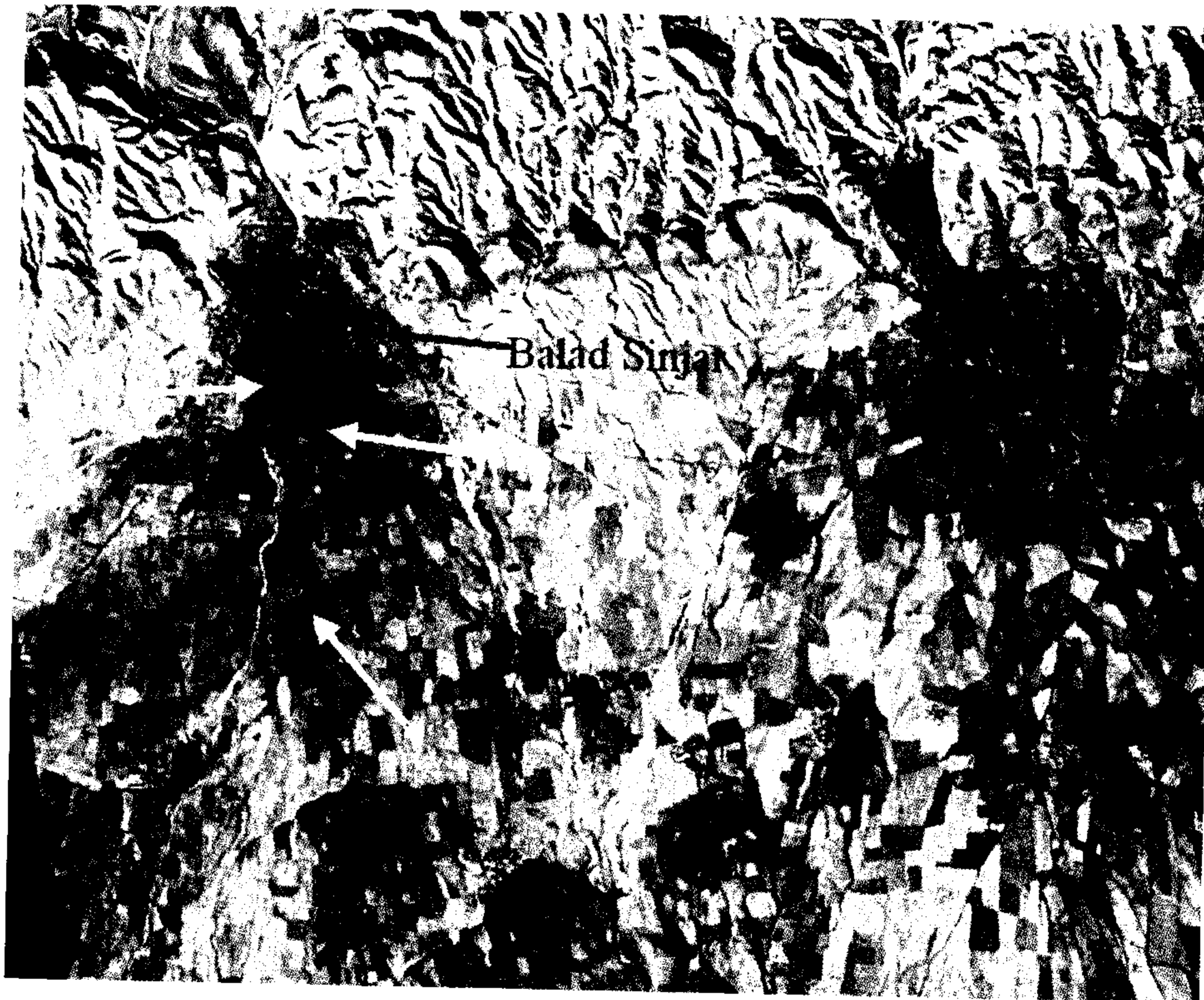


Fig. 6. CORONA December 6, 1969 image showing the area of Balad Sinjar. The dark areas shown by the white arrows indicate spring flow and runoff from Jebel Sinjar (top of image).

شكل ٦: CORONA ٦ كانون الأول ١٩٦٩، صورة تظهر منطقة بلد سنجان. تمثل المناطق السوداء المشار إليها بأسهم بيضاء ينابيع ومياه الأمطار الجارية من جبل سنجان (في أعلى الصورة).

the visible hollow ways one may surmise that a route appears to have existed between Tell Hanu and Balad Sinjar.

As linear hollows approach Balad Sinjar, the imagery becomes more difficult to use. Hollow ways were not readily noticeable near this town, perhaps due to several reasons (Fig. 5). One of which might be the fact that the very fertile soils near the site, and the fact that Balad Sinjar has been continually occupied for millennia, has meant that the fields near the site have been recurrently plowed<sup>26</sup>. This plowing may have erased any evident hollow ways, much like some of the hollow ways near Nineveh<sup>27</sup>.

<sup>26</sup> Oates 1968, 97–108; Gregory – Kennedy 1985, 6–21; Ibrahim 1986, 76.

<sup>27</sup> Altaweel 2004.

Furthermore, water flow from springs and runoff from Jebel Sinjar may have deposited soil from that ridge which could have buried remnants of road systems. The springs and water flow also make the area relatively wet (Fig. 6), thus more difficult to locate hollow ways since their identification depends on their basins having a greater amount of water than their surroundings. If an area surrounding any possible linear hollow is relatively wet, then that hollow way will not be differentiated easily on CORONA imagery. Nevertheless, the trajectories of the present hollow ways shown in Figure 5 make it clear that Balad Sinjar was a focus for routes coming from Tell al-Hadhail and Tell Hanu. Therefore, despite a lack of visible hollow ways in the immediate area of Balad Sinjar, routes connecting Hatra and Balad Sinjar can be proposed, with Tell al-Hadhail and Tell Hanu serving as important towns and/or possible stops within the routes.

Other long-distance routes connecting Hatra to sites in the northeast, such as Nineveh or Khirbet Jaddalah<sup>28</sup>, would have certainly existed; however, they are not visible in the imagery analyzed. Nineveh was such an important Arsacid center that one can only expect that a route would have connected it with Hatra<sup>29</sup>. This is further corroborated by classical sources which frequently refer to the crossing of the Tigris at or near Nineveh. Perhaps future analyses using remote sensing data can help to show other routes that connected Hatra with key regions and cities, particularly in the Arsacid period.

#### IV DATING HOLLOW WAYS

The dating of routes identified in satellite imagery bears comparable problems to dating ancient canals. The date of any route is not self-evident, but can only be established through dating the sites connected by the routes. In addition, we have to assume that especially long-distance routes were used for extended periods of time. Most often the paths they follow adhere to the limitations and opportunities offered by the natural environment. But the intensity of use varies in accord with the importance of sites they connect. In this respect the routes approaching Hatra offer specific insights in the historical landscape as they can be closely dated.

As mentioned above, Hatra is situated south of the modern margins of arable land. It nevertheless has a favorably natural setting close to the Wadi Tharthar, and at a place where water surfaced and/or was easy to tap. It is likely then that a settlement or at

<sup>28</sup> Ibrahim 1986, 52 no. 68.

<sup>29</sup> Eiland 1998; Reade 1998.

least regularly visited camps existed for long periods of time before the city gained importance in the first century A.D. Judging from the routes leaving Assur it seems not unlikely that Hatra was tangent to or even served as stop on the route from the city towards and across the Jaziran steppe<sup>30</sup>. Ali suggested that Hatra was mentioned in the Old Testamental book *Jeremia* (49, 32–33) as a “kingdom” conquered by Nebuchadnezzar in 599 B.C.<sup>31</sup>. He interpreted thick ash layers on virgin soil excavated by Ibrahim in two soundings within Hatra’s central temenos as archaeological corroboration for this. Unfortunately, these levels remain undated so far<sup>32</sup>. A few pieces of fourth to third century B.C. pottery were found close to virgin soil in additional soundings carried out below the second century A.D. temenos precinct by the Italian expedition in 1996–98<sup>33</sup>. Thus the site itself had been a meeting place and maybe some settlement for some time prior to the Arsacid period. Still proof for any substantial settlement before the first century A.D. is wanting.

Hatra developed into a major town in the first century A.D. Between A.D. 120 and 150 it was greatly enlarged and transformed into a spacious, nearly round city of two kilometers in diameter<sup>34</sup>. Hatra became the capital of the “Kingdom of the Arabs” at about A.D. 166 and was conquered by the first Sasanian king of kings Ardashir in A.D. 240. Although limited continuation of settlement indicated by rebuilding was proposed, no material dating to post A.D. 240 was published<sup>35</sup>.

Nevertheless, we should assume that the ruins became a point of reference for nomadic groups. Natural as well as artificial water sources will continue to function and attract people even after settlements or routes have become derelict. Standing ruins and ruined structures draw nomads not only for their location at important resources, but they also provide shelter and building materials for corrals and tent foundations<sup>36</sup>. Regular visitations to Hatra by nomads are mentioned frequently by Arab historians, showing that the site remained an important nomadic stop. At the end of the twelfth century, Hatra for a few years became a garrison of the Zengid rulers presumably for the control of nomadic groups. Afterwards, the usual nomadic visits

<sup>30</sup> Such a route from Assur via Hatra across the Jazira to the Khabur was tentatively reconstructed for the middle Assyrian period by Pfälzner 1993, 92–96.

<sup>31</sup> Ali 1996, 190.

<sup>32</sup> Ibrahim 1986, 92–94, 140 sees them as evidence for a beginning of the city as (temporary) nomadic encampment, but acknowledges the difficulty to date these levels without datable finds.

<sup>33</sup> Venco-Ricciardi 2001, 468.

<sup>34</sup> For a summary of the available evidence for the city’s history and discussion of its political role see Hauser 1998 and Hauser 2000; on the inscriptions found so far and their dates see Bertolino 1995.

<sup>35</sup> al-Salihi 1989/90 mentions rebuilding activities and proposed a continued settlement until the mid-fourth century. The idea is based on the reconstruction of the date of inscription 416 as A.D. 356. Gawlikowski 1994, 183, rejected this date. See Hauser 1998, 514–515 for discussion of the evidence for post A.D. 240 settlement.

<sup>36</sup> See Cribb 1991, 149–151.

began again as described by Ainsworth, who observed nomads’ tents “extending far and wide within the ruins and outside the walls to the south and west”<sup>37</sup>.

This short summary of Hatra’s history indicates that albeit the place might have been a conventional stop on routes prior to the building of the city wall of presumably the first century A.D., direct evidence is nearly non-existent. For most of the post-conquest period, i. e., after A.D. 240, textual evidence points to continued, but limited use of routes via Hatra. This makes it likely that the routes leading exactly to Hatra shown in the satellite images had their main use during the less than two-hundred years of Hatra’s importance during the Arsacid period. Together with Hatra, its trade routes would have remained in only limited use afterwards<sup>38</sup>. The likeliness that hollow ways radiating from Hatra date to the mid-first to mid-third century A.D. is high, because of Hatra’s limited existence as an important civic center. The hollow ways likewise underscore the importance of Hatra in long-distance traffic, mostly related to trade. In this particular case the assumption is independently supported by classical sources which correlate well with the satellite images. Most importantly, Hatra is shown as a meeting point for several south-north trade routes on the *Tabula Peutingeriana*, to which we turn next.

## V THE TABULA PEUTINGERIANA

For many years now, the *Tabula Peutingeriana* has been acknowledged to be one of the foremost sources on ancient geography for the Roman empire and beyond. The map, housed in the Kaiserliche Hofbibliothek of Vienna since 1738, dates to around A.D. 1200 and is a copy of an original Roman map<sup>39</sup>. Measuring 6.80 by 0.34 m, divided in eleven segments, the *Tabula Peutingeriana* visualizes the description of hundreds of ancient routes between France in the west and China in the east<sup>40</sup>. Although rivers and mountains are often indicated, the *Tabula Peutingeriana* did not attempt to give an abstract cartographic picture of the world like modern atlases. Instead, it combines itineraries into a comprehensive visual handbook of the main routes in the ancient world as known to Rome. The redaction of the original map, from which the medieval copy was drawn, probably lasted several hundred years. The model for the *Tabula Peutingeriana* presumably dates to the mid-fifth century A.D.<sup>41</sup>.

<sup>37</sup> Ainsworth 1842 vol. II, 164 further details that because of good water and pasture situations travellers “may be almost sure of meeting Arabs at Palmyra as at Al Hadhr”.

<sup>38</sup> Rich 1836, 110 reports on caravans bringing salt from the area of Hatra to Mosul.

<sup>39</sup> On the date and history of the map see Weber 1989.

<sup>40</sup> A twelfth segment which most certainly covered Britain and Ireland is missing. For an introduction into the map and its content together with excellent facsimiles, see Weber 1976.

<sup>41</sup> Weber 1989, 115; Bosio 1983, 154.



Although the density of routes indicated on the maps is more pronounced for the Roman empire, Mesopotamia is very well covered on segment X<sup>42</sup>. As argued elsewhere, the routes indicated for northern Mesopotamia (Fig. 7) probably mirror the situation of the early third century<sup>43</sup>. Hatra is shown (coincidentally) close to the center of the segment as meeting point of major routes<sup>44</sup>. Its importance is augmented by a double-tower symbol reserved on the map for major cities which played a role as important crossings, start- or endpoints of routes. One route, approaching Hatra from the left on the lower left side of Figure 7, comes from *Tharrana*, *Tigubis* and *Sirgora*. A second route, nearly vertical on the map, approaches Hatra from *Nisibi(s)* via *Singara*. A third connection, on the right in Figure 7, is shown between Hatra and *Ctesiphum*, the Arsacid and Sasanian capital *Ctesiphon*, via *Peloriarcha*. But before we attempt to compare these routes with the evidence for hollow ways from satellite images, a few words on the character of the information and the difficulties in using the source are in place.

As mentioned, the *Tabula Peutingeriana* is a compilation of itineraries. This character is evident from the visual representation of routes in form of stepped lines. Most routes are shown as nearly straight, mostly horizontal lines interrupted at irregular intervals by little prongs or indentations. Next to these the name of a city or halting place is indicated, followed by a number of Roman miles (*mille passus* of 1481.5 m, pl. *milia passuum*, hereafter: MP) describing the distance to the next place mentioned. While this is the general idea, there are exceptions to the rule where routes show some bends and more indentations than place names. On the Mesopotamian map this occurs on the route from *Nisibi* to *Thelser* shown running vertical on the right side of Figure 7. As the route leads through the Zagros mountains, and after crossing the Tigris, we may advance the idea that the bends are meant to indicate a winding path through mountain passes.

Indications of specific geographical features are, nevertheless, on the whole limited and sometimes misleading. Without an abstract idea of the general geography of the wider area, the author(s) of the map had obvious difficulties to reconcile all the various itineraries into a comprehensive picture as on modern maps showing public transportation systems. Although routes usually join where the same city appears in different

<sup>42</sup> This counting follows the facsimile edition of Weber 1976. The older literature and also the TAVO reproduction (TAVO Karte B S 1.2) follow the earlier edition of Miller (1916) who included the missing map of Britain as number one in his counting. According to this counting, Mesopotamia is covered on segment XI.

<sup>43</sup> Hauser 1995, 226–227. The dating largely depends on the identification of the Roman castellum of 'Ain Sinu with the place *Zaguræ* mentioned on the map as stop 21 Roman miles from *Singara* (Balad Sinjar). The reservations voiced in Hauser 1995, 227 n. 16, have to be considered.

<sup>44</sup> An alternative explanation sees the double-tower symbol as reference to the quality of lodging available. For the wider area under discussion here, the more general implication seems preferable.

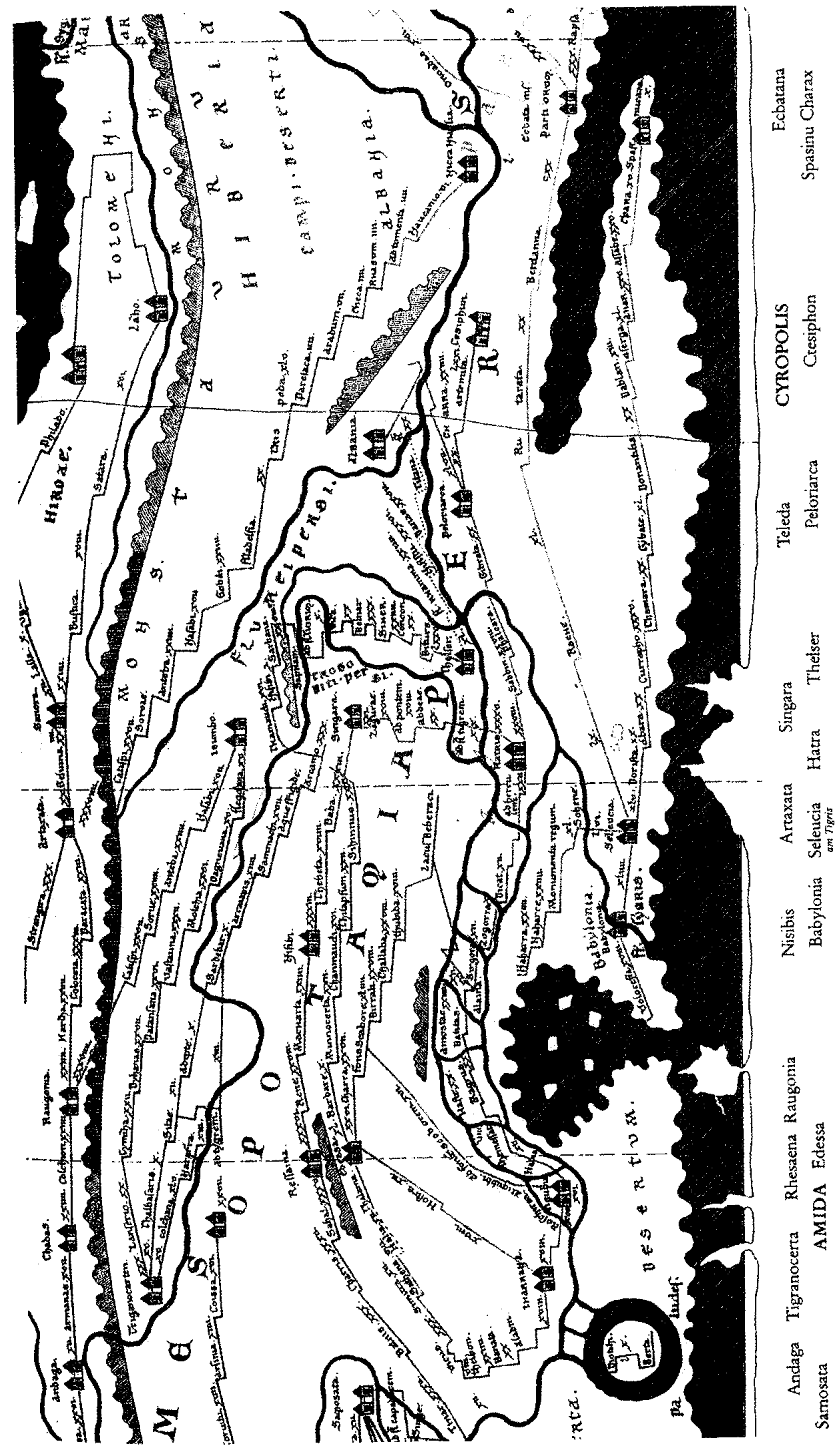


Fig. 7. *Tabula Peutingeriana*, Codex Vindobonensis 324. Section of segment X showing routes of Mesopotamia with Hatra in the center. Reproduced after Tübingen Atlas des Vorderen Orients map B S 1.2.

شكل ٧: خريطة تابولا بويتينجيريانا، مخطوطة فيندوبونيس ٣٢٤. قسم من القطاع X يظهر طرق بلاد ما بين النهرين مع الحضر في المركز. نسخة عن أطلس توينغن للشرق القديم TAVO، خريطة رقم B.S 1.2.

routes, in certain cases the authors could not avoid to repeat certain cities or in one case a whole stretch of routes which appear twice in the map at different locations<sup>45</sup>. An example in case is Balad Sinjar, ancient Singara. While *Singara* is shown on the route to *Nisibis*, the city appears as *Sirgora* on the route to the left of Hatra<sup>46</sup>.

For modern scholars working on Mesopotamian historical topography this often sufficed to belittle the Tabula Peutingeriana as an important but problematic source. The frustration about the Tabula seems understandable considering that at times distances are clearly missing, sites appear twice under differently spelled names and at different places, place names often appear corrupted, and that many of them are unknown from other antique sources. This led to a general disregard of the actual information the source provides. Scholars tended to ascribe differences between the distances given on the map and their own propositions for site identifications to errors introduced by monks during the process of assumed repeated copying until around A.D. 1200<sup>47</sup>. Over the years it became a habit to emendate the Tabula's data to fit preconceived ideas instead of taking it seriously and admitting to unsuccessful location of routes and sites.

#### VI NORTHERN ROUTES TO HATRA IN THE TABULA PEUTINGERIANA AND SATELLITE IMAGES

This applies also for the routes connecting Hatra which received various reconstructions. For the two routes from Balad Sinjar to Hatra it was generally assumed that at least one approached Hatra from a place on the Tigris river, presumably close to Nineveh. This is most certainly true for the route described on the Tabula as follows:

<sup>45</sup> Miller (1916, LI) correctly points out that this happens mostly in places where different spelling obscured the identity of places. In cases of uncertainty the compiler might have deliberately chosen to mention both places as an erroneous identification would have caused much more severe results. Approximately half of all obvious errors on the entire eleven segments of the Tabula Peutingeriana appear in connection with Mesopotamia.

<sup>46</sup> The identification of *Singara* with *Sirgora* was first advanced by Kiepert in 1909. Miller 1916, Sp. 780 and Fig. 241 is the only one who afterwards discriminated the two.

<sup>47</sup> In fact, there is no proof that the Tabula was copied more than once. Already Miller, who published the first complete commentary on the Tabula in 1887 and a completely revised version in 1916, although he remained scrupulous recommended to insert additional stations, if the distances did not suffice. Dussaud 1927 and Dillemann 1962, two reference works on the ancient geography of the region, show no timidity to constantly changing the distances given in the Tabula at their discretion. Dillemann even interfered with the integrity of the routes, redrawing parts of the map and replacing place names until they fit his preconceptions, e. g., his Fig. XXI. As both authors, in addition, worked with faulty copies, their results in respect to the Tabula Peutingeriana have to be used with greatest care.

*Singara* – 21 MP – *Zaguræ* – 18 MP – *ad pontem* – 18 MP – *Abdeae* – 20 MP – *ad flumen tigram* – 20 MP – [prong without name] – 35 MP – *Hatris*<sup>48</sup>.

Reconstructions for the other route were few. On the Tabula it appears as:

*Sirgora* – 12 MP – *Zogorra* – 10 MP – *Dicat* – 12 MP – [prong without name or distance] – [prong without name or distance] – *Ad herculem* – 22 MP – *Hatris*<sup>49</sup>.

Difficulties arise from the uncertain interpretation of the prongs without further descriptions and the distance of only 56 MP (or 83 kilometers) which is short by 30 kilometers for the actual distance between Balad Sinjar and Hatra.

Dillemann believed that despite the different distances given from *Singara* and *Sirgora* and the different spelling *Zaguræ* and *Zogorra* were one and the same site situated, as Herzfeld had proposed, at 'Ain el-Shahid ('Ain Sinu). He identified it with the Roman camp *Ur* mentioned by Ammianus Marcellinus. From there he proposed that the routes split, one leading south towards Hatra<sup>50</sup>. Already Herzfeld had proposed that the unnamed prongs represented unnamed stations. Now Oates assumed that their missing description was the result of corruption in the process of copying. In his view both routes from Balad Sinjar to Hatra were in fact identical, just mentioning different places on the way. He thus combined both routes and arranged them in a way that allowed him to add the distances indicated. His solution transformed two routes of five stations each between Sinjar and Hatra into one artificially created route of six stations<sup>51</sup>. Since this proposition in its complete elimination of one route and changes

<sup>48</sup> The exact route, nevertheless, presents problems in that the combined distances do not allow for a trip from Balad Sinjar to the Tigris and back inland to Hatra. For the various propositions by Herzfeld, Stein and Oates see Hauser 1995, 229–230.

<sup>49</sup> There are difficulties in the reading of the name and distance given behind *Dicat*. Miller (1916) and Dillemann (1962) both read *Dicat* as place name and in their respective reproductions interpreted the signs as XII for 12 MP. Oates (1968, 78) on the other hand read "*Vicat* VIII". Hauser (1995) followed Oates's reading of the place name, but also read XII as distance. Comparison with capitalized letters "D" and "V" across the Tabula supports the reading of Miller and Dillemann of the name. Repeated close inspection of the reproduction by Weber 1976 leaves no doubt that there are only two vertical strokes followed by the usual dot which indicates the end of place names or distances throughout the map. It remains difficult to decide whether the first number is in fact V or X followed by two vertical strokes. Problem is that the lower left stroke for a X is missing. On the other hand, Vs are otherwise more rounded on the right side. In addition the dot following the name *Dicat*, is blurred and enlarged just the way as though it was met by the end of the cross stroke for the X drawn with too little ink. Although it is difficult to completely exclude Oates's reading, it seems preferable to follow Miller again.

<sup>50</sup> Dillemann 1962 Fig. 18; cf. Sarre – Herzfeld 1911, 206; Sarre – Herzfeld 1920, 305 Fig. 283.

<sup>51</sup> Oates 1968, 78–80. The route is also discussed by Stein, cf. Gregory – Kennedy 1985, 80–83. Stein agrees with the identification of *Zaguræ* and *Zogorra*, but he erroneously assumes that the places mentioned are Roman castella. He therefore endeavors to sketch the route according to the supposed military compounds he detected from the air. He adds another unknown station and changes every single distance, so that in the end his reconstruction shares only vague reminiscences with the Tabula Peutingeriana.

in various distances not only completely ignored the integrity of the source, but also created as many problems as it solved, it was rejected by Hauser. Contrary to earlier attempts he proposed a close reading of the Tabula's informations. He concluded that the route from *Singora* to Hatra followed the shortest way across the steppe, stopping at Tell al-Hadhail which he identified with *Dicat*. The two blank prongs he interpreted as indications for possible watering places at a half-day's distances<sup>52</sup>.

This proposition, in fact, complies with the evidence from the satellite images discussed above, which show a direct route from Hatra towards Tell al-Hadhail leading to Balad Sinjar. Starting from Hatra into a straight northwestern direction the route can be described as follows. According to the Tabula Peutingeriana we would have to look for a site, village, water source and/or sanctuary called *ad herculem* at a distance of approximately 32.6 kilometers from Hatra. This is about the place where the route is visible on Figure 2 (the unmarked site on the route to Balad Sinjar) crossing to the west of a minor wadi. From there it is another 56 kilometers (or 38 MP) to Tell al-Hadhail.

It has already been indicated that Tell al-Hadhail is a major site on the route with Arsacid and Sasanian occupation<sup>53</sup>. Its distance from Balad Sinjar is 27.5 kilometers or 19 MP. This fits well with the actual distance between *Singara* and the second stop towards Hatra, *Dicat*. The Tabula gives 22 MP (32.6 kilometers) which offers room for various possible routes as indicated in the satellite images. Nevertheless, if we assume that the route followed contemporary, i. e., Arsacid period, sites, only few variants remain. Neither Tell Hatimiya (Ibrahim no. 239), nor Tell Hanu (Ibrahim no. 235; here Fig. 5), a Sasanian period site located about 13 kilometers northwest of Tell al-Hadhail, are dated by Ibrahim to the Arsacid period. Thus support for a stop along the route leading to Balad Sinjar is missing<sup>54</sup>.

As mentioned the distance between Tell al-Hadhail and the point where we have to expect the place called *ad herculem* is approximately 56 km or 38 PM. The name *Dicat* on the Tabula is followed by the distance of 12 PM towards an undisclosed site. Subtracting these 12 Roman miles from the actual distance between Tell al-Hadhail

<sup>52</sup> Hauser 1995, 230–232.

<sup>53</sup> Kessler 1987 suggested that Tell al-Hadhail could be the Assyrian provincial capital Rasappa. The identification was not further pursued, cf. Parpola – Porter 2001.

<sup>54</sup> A more likely candidate for *Zogorra* fitting the distances given on the Tabula towards Singara and Tell al-Hadhail is the modern subcenter 'Ain Ghazal. Likewise possible seems Tell Binat (Ibrahim 1986, no. 206) at a distance of 17.8 kilometers south-east of Balad Sinjar. Both sites provide good water. From Tell Binat it is a little bit over 12 kilometers as the crow flies to Tell al-Hadhail, compared to 14.8 kilometers given in Tabula Peutingeriana for the distance between *Zogorra* and *Dicat*. The US Army map of 1942, No. J-38 S/SW Tell 'Afar, 1:100000, shows that the modern track from there after crossing the Wadi Ishtalyiba, bends east for a few miles towards Tell al-Hayat and then back west to Tell al-Hadhail. If the route would have followed the modern track we could look for *Zogorra* at Tall Binat. But as this site is a very small hamlet according to Ibrahim it might not have been mentioned by name in the Tabula Peutingeriana.

and the supposed location of *ad herculem* a distance of 26 PM remains to be covered. This distance corresponds with the most common range of distances between stations given in the Tabula which often vary between 24 PM and 28 PM. These numbers equal a typical distance covered in one day by caravans<sup>55</sup>. In between Hatra and Tell al-Hadhail the route passes a number of sites, notably Tell al-Shukkariah, Tell al-Sin and Tell Umm Zanabir. But except for Tell al-Sin none was included in Ibrahim's Survey<sup>56</sup>. At a distance of 14 kilometers from Tell al-Hadhail it is an unlikely candidate for the unnamed point in a distance of 12 MP south of *Dicat*.

To sum up, the satellite images provided new evidence that at Balad Sinjar a direct route across the plain towards Hatra branched off from the main east-west highway. This route is also shown on the Tabula Peutingeriana. Although most of the places mentioned can only be located through future survey work, the formerly proposed identification of Tell al-Hadhail with *Dicat* is supported by the hollow way identified. It is corroborated by the fact that Tell al-Hadhail is the largest site in the area and is favorable for settlement.

#### VII SOUTHERN ROUTES TO HATRA IN THE TABULA PEUTINGERIANA AND SATELLITE IMAGES

The Tabula Peutingeriana also offers the description of a route connecting the Arsacid capital Ctesiphon with Hatra via Tekrit. Starting at Hatra the route reads:

*Hatris* – 28 MP – *Sabbin* – 28 MP – *Phalcara* – [no distance given] – *Gibrata* – 20 MP – *Peloriarca* – 20 MP – *Charra* – 24 MP – *Artemita* – 71 MP – *Cesiphun*.

While the start and endpoint of this route are known, the other place names were controversially debated. Only recently *Gibrata* was established as Tekrit<sup>57</sup>. What concerns us here is the route between Hatra and Tekrit.

For a long time it was a commonly held assumption that from Hatra to the south the route would lead toward Assur<sup>58</sup>. In 1907 Herzfeld identified Assur with the place *Sabbin* listed on the Tabula Peutingeriana as the first station on the trip from Hatra to

<sup>55</sup> See, e. g., Herzfeld, in: Sarre – Herzfeld 1911, 112 n. 2. The route visible in the satellite images has a very minor difference to the one reconstructed by Hauser 1995, who had expected that from Tell al-Hadhail (Ibrahim site no. 205, identified as *Vicat* [*Dicat*]) and Tell al-Sin (Ibrahim site no. 195) the route would run a few kilometers to the east and then straight south to Hatra in order to avoid crossing any major wadi beds.

<sup>56</sup> Ibrahim 1986, 71 n. 195.

<sup>57</sup> Hauser 1995, 232–233: *Gibrata* = Tekrit and *Peloriarca* = *Charcha* = Karkh Fairuz; followed by Roaf – Simpson 2000.

<sup>58</sup> Miglus 1996, 65–70; Hauser 1996.

the Arsacid capital Ctesiphon<sup>59</sup>. He reasoned that *Sabbin* was a misspelling for “Labbana”, a site mentioned by Ptolemaios in his *Geography* as west of the Tigris, or Libana, reported in Stephanos Byzantinos’s excerpts from Arrian as neighbouring Hatra<sup>60</sup>. Herzfeld’s identification rested on the assumption that there was no other city which could be called “neighbouring Hatra” than Assur. Since the existence of other larger settlements in the steppe was proven by Ibrahim, Hauser argued that it was necessary to look for alternatives which better fit the description of the Tabula Peutingeriana<sup>61</sup>. He indicated that it was unpractical to use Assur as stop between Tekrit and Hatra as it would mean a detour of 25–30 kilometers in comparison to a more direct route across the steppe. In addition caravans would have had to cross Jebel Makhul using the passage indicated on Figure 2<sup>62</sup>. This image clearly shows the routes from Tekrit to Assur and between Assur and Hatra. The latter probably not only followed the Assyrian route towards the steppe, but also served for inter-city traffic of these two centers during the Arsacid period. Nevertheless, for long distance trade between Tekrit and Hatra a direct route across the steppe, as long as it was safe, had obvious advantages. Because of the detour and the more difficult terrain, merchants would probably lose a full day, if they were to include Assur in their itinerary.

These considerations fully agree with the satellite images. Several routes leading south from Hatra are clearly visible. Particularly clear on the satellite imagery appears the nearly straight southeasterly route from Hatra towards Tekrit along the flanks of Jebel Makhul. Unfortunately, current knowledge on sites along this route offers no indication for the identification of *Sabbin* or *Phalcaria*. The only site on the track dating to the Arsacid period according to Ibrahim’s important study is Tell Jedaydah<sup>63</sup>. Nevertheless, the small site does not fit the distances given by the Tabula Peutingeriana for *Sabbin*, as it is, like Assur, more than 50 kilometers away from Hatra. Neither is there a single site indicated on this route which could be identified with the next stop: *Phalcaria*. Given the importance of Hatra, Tekrit and the route in between during the Arsacid period, we should nevertheless, propose the use of this route particularly during this time.

<sup>59</sup> Herzfeld 1907, 237. The identity of all these places was – with the noteworthy exception of Walter Andrae – generally accepted, e. g., Dillemann 1962, 170. Most recently Reade (1998, 78) re-aligned Assur with Libanae, Labbana. He proposed that this name developed from the Assyrian name for Assur’s city center “libbi ali”. Nevertheless, a sound shift l > n appears rather unusual and difficult to explain. On Assur’s name during the Arsacid period see Hauser forthcoming b.

<sup>60</sup> Ptolemaios V 18 § 9 and VIII 20; Roos 1967, 231; Arrian book 9.

<sup>61</sup> Hauser 1995, 232. The distance between Hatra and *Sabbin* given on the Tabula Peutingeriana is only 28 MP, while the actual distance to Assur is 37 MP, a discrepancy also noticed by Herzfeld.

<sup>62</sup> Hauser 1995, 232.

<sup>63</sup> Ibrahim 1986, 54 no. 81. The only other site on the route is Tulul al Bag (no. 80). Nevertheless, according to Ibrahim the site has no Parthian material, but “prehistoric (?), Ur III, Assyrian, Sasanian and Islamic”.

In Medieval times, however, travellers and caravans generally preferred routes on the eastern side of the Tigris river to go from Baghdad to Mosul. Several authors describe the main route as leading from Baghdad via Daquqa, Kerkuk, Erbil and Nineveh to Mosul<sup>64</sup>. Downstream from Mosul to Baghdad *keleks* were often used. The route west of the Tigris was rarely mentioned and less often followed. Ibn Jubair travelled it in 1184, Ibn Baṭṭūṭa in 1327, and Carsten Niebuhr pointed out that the route was shorter than via Kerkuk and Arbil, though it was rarely used<sup>65</sup>. The most likely reason is mentioned by Oppenheim who reports that the route was very dangerous even in his times<sup>66</sup>. This fits the fact that our only report on a western route stems from the Zengid period.

The route along the western side of the Jebel Makhul was followed by Ibn Jubair in 1184. Ibn Jubair relates that the group of pilgrims he was travelling with decided to stay near a village called Judaydah. He further reports that close to this new village there was a large village that they passed called al-‘Aqr. On the next day the group moved on to Qayyara.

Ibrahim identified Tell Ibdah (his no. 263) as al-‘Aqr and Tell Jedaydah (his no. 81) as the village Jedaydah (“the little new one”) mentioned by Ibn Jubair<sup>67</sup>. Nevertheless, while Ibn Jubair reports that the villages were close to each other, Tell Ibdah and Tell Jedaydah are about 50 kilometers apart. Furthermore, Ibn Jubair seems to imply that his Jedaydah was on the Tigris, not only some distance from it. He further augments that there was a solidly built khan newly erected close to the village and that other villages and fields stretched from there to Mosul in an uninterrupted line. Unfortunately, it seems uncertain whether these two informations relate to Jedaydah or to al-‘Aqr, which was identified by Heidemann with ancient Assur<sup>68</sup>.

Thus, for several reasons the identification of Ibrahim’s Tell Jedaydah with the Jedaydah of Ibn Jubair is unlikely. First, Ibn Jubair’s Jedaydah was probably on the Tigris. Second, it was presumably very close to Assur. Third, whether the information that from “there” to Mosul there were villages and fields relates to Jedaydah or close by al-‘Aqr, the place must have been on the western side of Jebel Makhul. Lastly, it would have been difficult, albeit not impossible, for Ibn Jubair to reach Qayyara the next day starting from Ibrahim’s site no. 81.

<sup>64</sup> Ibn Ḥauqal, Kitāb Sūrat al-arḍ I, 202, 212, 213, 219; Iṣṭakhri, al-masālik wal-mamālik, 53; Idrisi, Kitāb nuḥzat al-muṣṭaq, 658–660; Mustaufi, Nuzhat al-qulūb, 167; cf. the discussion of Heidemann 1996, 261–262.

<sup>65</sup> Niebuhr 1968 II 355. Rich (1836, 147), who never visited Hatra, reports from Tekrit that “Al Hadhr is two long days’ journey from hence, N. 30 W.” This seems a rather optimistic assumption given the fact that the distance is approximately 150 kilometers. Either his informant was himself uncertain about the route, or a misunderstanding occurred before Rich’s memoirs were published. Cf. Ross 1839 for the first report on the ruins.

<sup>66</sup> Oppenheim 1900, 193. Here we follow Heidemann 1996, 262.

<sup>67</sup> Ibrahim 1986, 54. 83.

<sup>68</sup> Heidemann 1996, 264–271.

This assessment above agrees with the hollow ways. The route from Tekrit to Assur branches off to the east nearly 10 kilometers south of Tell Jedaydah. And although a connecting route from Assur nearly straight to the west is not impossible, it neither shows on the satellite imagery nor does it seem necessary as the main routes from Assur towards Hatra and Tekrit run different terrain. Thus, if Assur is to be identified with al-'Aqr, Ibn Jubair left the track before reaching Ibrahim's Tell Jedaydah, the only site on the route with Arsacid period remains.

The void of Arsacid period sites on this route leaves us in limbo about the identification of *Sabbīn* and *Phalcara*. As mentioned in the description of Figure 2 above, two more routes seem to lead towards Tell Ajri, a major site during the Arsacid period, but the hollow ways fade approximately 35 kilometers south of Hatra. There are faint traces of two additional routes on the western side of the Tharthar intersecting the routes to Tell Ajri and leading towards the direction of a group of tells around Umm Etlail<sup>69</sup>. In 1995 Hauser proposed an identification of Umm Etlail with *Sabbīn* and Tell Ajri with *Phalcara*. We cannot support these assumptions from the satellite images currently available to us. Other images and even more ground field work would be necessary and highly desirable for the reconstruction of the Arsacid and other period historical geography of the area.

## VII SUMMARY

Although the issue of pinpointing all of the Tabula Peutingeriana's stations remained unsolved, the above discussions furnished a number of results. The satellite image showing hollow ways leading exactly towards the gates of Hatra (Fig. 1) demonstrates the linear hollows' former function as ancient routes. Hollow ways, therefore, offer various opportunities for historical topography in that they show connections between ancient sites on a local and intra- or interregional level. While long distance routes often remained in use for millenia, a more specific dating of the intense use of hollow ways seems possible under certain conditions. The limited period of large-scale settlement at Hatra during the first to third century A.D. puts a firm date for the primary use of hollow ways radiating from this city. This is corroborated by the evidence from the Tabula Peutingeriana where Hatra is shown as a meeting point of trade routes connecting the Arsacid capital Ctesiphon and lowland Mesopotamia in general with Armenia and the eastern border of the Roman empire via *Singara* and *Nisibis* or Edessa. Here satellite imagery helps to verify the course of the routes described by the itineraries shown on this Roman map and gives credence to its reliability.

<sup>69</sup> We had difficulties to positively identify Umm Etlail and the other sites shown close to it by Ibrahim (1986, 45 Pl. 9) on the satellite images available.

Contrary to older reconstructions and despite difficulties to follow the route close to Jebel Sinjar, one route of the Tabula Peutingeriana was shown as most likely branching off to the south into the steppe from Balad Sinjar towards Hatra via Tell al-Hadhail, which we would like to identify with ancient *Dicat*. The situation is more difficult with the routes south of Hatra. The satellite images indicate that a major thoroughfare was leading towards or coming from Tekrit along the Jebel Makhul. This evidence, not surprising in itself, lends further support to the assumption that the trade route shown on the Tabula bypassed Assur. Still, neither Jedaydah nor any other site mentioned by Ibrahim fits the description of the Tabula Peutingeriana for the location of *Sabbīn* or *Phalcara*, two places mentioned on the Tabula Peutingeriana on the way to Tekrit. Lacking detailed archaeological survey, no site could be positively identified. But even without further identifications, Hatra's central role in the long distance route between Ctesiphon and the Roman empire and most probably in trade transacted along this route can be confirmed. The route via Hatra should be considered an alternative route and competitor for traffic and long-distance trade to those along the Euphrates and to Palmyra. It is no surprise that this route was also followed by the Roman troops retreating from their abandoned attempt to conquer Ctesiphon in 363<sup>70</sup>.

Long-distance trade, on the other hand, influences the neighbouring areas of the routes. In particular, caravan trade generates an additional, rather secure and often important source of income for nomads, who may serve as guides and guards in the steppe<sup>71</sup>. Trade is also a major factor in the decision for nomads to become sedentary. According to the survey conducted by Ibrahim, an increased settlement in the eastern Jazira can be observed in the Arsacid period<sup>72</sup>. One of the factors prompting and supporting this development, we may suggest, is the trade via Hatra<sup>73</sup>. The evidence from satellite images and the Tabula Peutingeriana for the trade routes running across the steppe towards Hatra, thus, contributes to our understanding of Hatra's development from a center of nomadic tribes to a religious center, and finally the political capital of the "kingdom of the Arabs" and most certainly an important center for trade.

<sup>70</sup> Ammianus Marcellinus 25, 8, 5–16.

<sup>71</sup> Khazanov 1994, 209–212.

<sup>72</sup> Ibrahim 1986; Hauser 2000.

<sup>73</sup> Other factors will be discussed in Hauser forthcoming a.

## ABSTRACT

Hatra, the first UNESCO world heritage site in Iraq, is known as a political and religious center of the "Kingdom of the Arabs" in the eastern Jazirah. Still its role in long distance caravan trade during the first centuries A.D. remains enigmatic. The article describes the major routes leading towards Hatra based on modern satellite imagery and ancient sources, in particular the Tabula Peutingeriana, a Roman itinerary map. In this contribution several sites are identified by their ancient names. Thus, the article adds pertinent information on the geographical history of northern Iraq and Hatra's position on major trade routes. Furthermore, the article augments the use of satellite imagery for the identification of ancient routes and helps to verify the information given by the Tabula Peutingeriana. We hope that in the future this research can be carried on the ground in a survey in a peaceful Iraq.

## الخلاصة

الحضر، أول موقع في العراق ضمن لائحة منظمة اليونسكو للتراث العالمي، معروفة كمركز سياسي وديني لمملكة العرب في منطقة الجزيرة الشرقية. ومع ذلك فإن دورها في قوافل التجارة النائية خلال القرون الميلادية الأولى ما يزال مبهماً. تصف هذه المقالة الطرق الرئيسية التي تقود إلى الحضر وذلك اعتماداً على صور الأقمار الصناعية الحديثة والمصادر القديمة، بشكل خاص تابولا بويتنجريانا، وهي خريطة رومانية لطرق الرحالة. كما يتم تحديد العديد من المواقع بأسمائها القديمة. وهكذا فإن المقالة تضيف معلومة وثيقة الصلة بالجغرافية التاريخية لشمال العراق وبمنزلة الحضر بالنسبة للطرق التجارية الرئيسية. إضافة إلى ذلك يزيد المقال من استخدام صور الأقمار الصناعية لتحديد الطرق القديمة ويساعد على التحقق من المعلومات التي تقدمها خريطة تابولا بويتنجريانا. ونأمل في أن تُنقل هذه الأبحاث على أرض الواقع مستقبلاً ضمن مسح أثري في عراق يعمه السلام.

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## BIBLIOGRAPHY

- Ainsworth, W. F.  
1842 Travels and Researches in Asia Minor, Mesopotamia, Chaldea, and Armenia. London.
- Ali, K. I.  
1996 Eine erste Miszelle: Zur Frage Hatra: aram. *Hatrā*, hebr. *Hāsōr/Hasar* = arab. *al-Ḥaḥr/Ḥaḥr/Ḥaḥr/Ḥaḥar\**, Oriens 35, 188–192.
- Al-Salihi, W. I.  
1989/90 The Sieges of Hatra, Sumer 46, 109–113.
- Altaweel, M.  
2004 The Roads of Ashur and Nineveh, Akkadica (forthcoming).
- Andrae, W.  
1977 Das wiedererstandene Assur, Zweite durchgesehene Auflage. München.
- Bertolino, R.  
1995 La Cronologia di Hatra: Interazione di archeologia e di epigrafia, Annali dell'Istituto Universitario Orientale, Supplemento n. 83. Napoli.
- Bosio, L.  
1983 La Tabula Peutingeriana. Une descrizione pittorica del mondo antico. Rimini.
- Bounni, A. et al. (eds.)  
1996 Palmyra and the Silk Road, AAAS 42.
- Cribb, R.  
1991 Nomads in Archaeology. Cambridge.
- Dillemann, L.  
1962 Haute Mésopotamie orientale et pays adjacents. Contribution à la géographie historique de la région, du V<sup>e</sup> s. avant l'ère chrétienne au VI<sup>e</sup> s. de cette ère. Paris.
- Drijvers, H. J. W.  
1977 Hatra, Palmyra und Edessa. Die Städte der syrisch-mesopotamischen Wüste in politischer, kulturgeschichtlicher und religionsgeschichtlicher Bedeutung, ANRW II 8, 799–906.
- Dussaud, R.  
1927 Topographie historique de la Syrie antique et médiévale. Paris.
- Eiland, M. L.  
1996 Parthians and Romans at Nineveh, in: E. Dabrowa (ed.), Ancient Iran and the Mediterranean World, Electrum 2, 55–68.
- Freyberger, K. S.  
1998 Die frühkaiserzeitlichen Heiligtümer der Karawanenstationen im hellenisierten Osten. Zeugnisse eines kulturellen Konflikts im Spannungsfeld zweier politischer Formationen. Damaszener Forschungen 6. Mainz.
- Gawlikowski, M.  
1988 La Route de l'Euphrate d'Isodore à Julien, in: P.-L. Gatié – B. Helly – J.-P. Rey-Coquais (eds.), Géographie historique au Proche Orient. Paris. 77–98.
- 1994 Fortress Hatra: New Evidence on Ramparts and Their History, Mesopotamia 29, 147–184.
- Gregory, S. – Kennedy, D. (eds.)  
1985 *Sir Aurel Stein's Limes Report*. BAR Int. Ser. 272. Oxford.
- Hartmann, U.  
2001 Das palmyrenische Reich, Oriens et Occidens 2. Stuttgart.

- Hauser, S. R.
- 1994 Chronologische und historisch-politische Untersuchungen zur östlichen Ġazira in vorislamischer Zeit. Berlin.
- 1995 Die mesopotamischen Handelswege nach der Tabula Peutingeriana, in: U. Finkbeiner – R. Dittmann – H. Hauptmann (eds.), Beiträge zur Kulturgeschichte Vorderasiens. Festschrift für R. M. Boehmer. Mainz. 225–235.
- 1996 The Production of Pottery in Arsacid Ashur, in: K. Bartl – St. R. Hauser, Continuity and Change in Northern Mesopotamia from the Hellenistic to the Early Islamic Period. Berliner Beiträge zum Vorderen Orient Bd. 17. Berlin. 55–84.
- 1998 Hatra und das Königreich der Araber, in: J. Wiesehöfer (ed.), Das Partherreich und seine Zeugnisse. Historia Einzelschriften 122. Stuttgart. 493–528.
- 2000 Ecological Borders and Political Frontiers: the Eastern Jazirah in the Later Preislamic Period, in: L. Milano et al. (eds.), Landscapes: Territories, Frontiers and Horizons in the Ancient Near East: Papers presented to the XLIV Rencontre Assyriologique Internationale, Venezia, 7–11 July 1997, part II. Padova. 187–201.
- 2004 Review of Udo Hartmann, Das palmyrenische Teilreich 2001, in: Orientalistische Literaturzeitung 99, Sp. 322–330.
- forthcoming a  
Hatra – Nomaden und Seßhafte an der Westgrenze des Arsakidenreiches, Mitteilungen des SFB „Differenz und Integration“, Orientalwissenschaftliche Hefte. Halle.
- forthcoming b  
Assur und sein Umland in der Arsakidenzeit, in: J. Renger (ed.), Assur: Gott – Stadt – Land. 5. Int. Colloquium der Deutschen Orient-Gesellschaft. Saarbrücken.
- Heidemann, S.
- 1996 Al-‘Aqr, Das islamische Assur: Ein Beitrag zur historischen Topographie in Nordmesopotamien, in: K. Bartl – St. R. Hauser, Continuity and Change in Northern Mesopotamia from the Hellenistic to the Early Islamic Period. Berliner Beiträge zum Vorderen Orient Bd. 17, Berlin. 259–286.
- Herzfeld, E.
- 1907 Untersuchungen über die historische Topographie der Landschaft am Tigris, Kleinen Zāb und Ġebel Ĥamrīn. Memnon 1, 1907, 89–143, 217–238.
- 1914 Hatra, ZDMG 68, 655–676.
- Ibrahim, J. K.
- 1986 Pre Islamic Settlement in Jazirah. Baghdad.
- Khazanov, A. M.
- 1994 Nomads and the Outside World. Second Edition. Madison.
- Kouchoukos, N.
- 2001 Satellite Images and Near Eastern Landscapes, Near Eastern Archaeology 64, 80–91.
- Miglus, P. A.
- 1996 Das Wohngebiet von Assur, WVDOG 93. Berlin.
- Miller, K.
- 1916 Itineraria Romana: Römische Reisewege an der Hand der Tabula Peutingeriana dargestellt. Stuttgart.

- Niebuhr, C.
- 1968 Reisebeschreibung nach Arabien und anderen umliegenden Ländern, Reprint der Ausgabe 1774–1778. Graz.
- Northedge, A. – Bamber, A. – Roaf, M.
- 1988 Excavations at ‘Āna. Qal‘a Island. Warminster.
- Oates, D.
- 1968 Studies in the History of Northern Iraq. London.
- Oppenheim, M. von
- 1900 Vom Mittelmeer zum Persischen Golf vol. II. Berlin.
- Parpola, S. – Porter, M. (eds.)
- 2001 The Helsinki Atlas of the Near East in the Neo-Assyrian Period. Portland/Helsinki.
- Pfälzner, P.
- 1993 Die Späte Bronzezeit: Tall Umm ‘Agrēbe, in: R. Bernbeck, Steppe als Kulturlandschaft. Berlin. 70–96.
- Reade, J. E.
- 1998 Graeco-Parthian Nineveh, Iraq 60, 1998, 65–83.
- Rich, C. J.
- 1836 Narrative of a Residence in Koordistan and on the Site of Ancient Nineveh with a Journal of a Voyage down the Tigris to Bagdad and an Account of a Visit to Shiraz and Persepolis. London.
- Roaf, M. – Simpson, S. J.
- 2000 Map Ctesiphon, in: Barrington Atlas of the Greek and Roman World. Princeton. 91–92.

- Ross, J.
- 1839 Notes on Two Journeys from Baghdad to the Ruins of Al Hadhr, in Mesopotamia, in 1836 and 1837, Journal of the Royal Geographic Society 9, 443–475.
- Roos, A. G.
- 1967 Flavius Arrianus II, Scripta Minora et Fragmenta. Leipzig.
- Safar, F. – Mustafa, M. A.
- 1974 Al-Hadhr, madīnāt aš-šams (Hatra: The City of the Sun [God]), Baghdad.
- Sarre, F. – Herzfeld, E.
- 1911 Archäologische Reise im Euphrat- und Tigrisgebiet, Bd. I. Berlin.
- 1920 Archäologische Reise im Euphrat- und Tigrisgebiet, Bd. II. Berlin.
- Schmidt-Colinet, A. (ed.)
- 1995 Palmyra. Kulturbegegnung im Grenzgebiet, Mainz.
- Schmidt-Colinet, A. – al-As‘ad, Kh.
- 2002 Archaeological News from Hellenistic Palmyra, Parthica 4, 157–166.
- Schuol, M.
- 2000 Die Charakene. Oriens et Occidens 1. Stuttgart.
- Shahīd, I.
- 1971 Al-Ĥira, Encyclopedia of Islam III 2nd ed. 1971, 462–463.
- Starcky, J. – Gawlikowski, M.
- 1985 Palmyre. Paris.
- Teixidor, J.
- 1984 Un port romain du désert: Palmyre et son commerce d’Auguste à Caracalla, Semitica 34, 1–125.

Tubach, J.

- 1986 *Im Schatten des Sonnengottes: Der Sonnenkult in Edessa, Harrān und Hatrā am Vorabend der christlichen Mission.* Wiesbaden.

Ur, J.

- 2002 *Settlement and Landscape in Northern Mesopotamia: The Tell Hamoukar Survey 2000–2001,* *Akkadica* 123, 67–88.

Venco-Ricciardi, R.

- 2001 *Dernières découvertes dans le temenos de Hatra,* in: C. Breniquet – Ch. Kepinski (eds.), *Études Mésopotamiennes. Recueil de textes offert à Jean-Loius Huot.* Paris. 464–487.

Weber, E.

- 1976 *Tabula Peutingeriana. Codex Vindobonensis 324. Faksimile-Ausgabe.* Graz.
- 1989 *Zur Datierung der Tabula Peutingeriana,* in: H. E. Herzig – R. Frei-Stolben (eds.), *Labor omnibus unus, Festschrift für Gerold Walser.* *Historia Einzelschriften* 60, 113–117.

Wilkinson, T. J.

- 1993 *Linear Hollows in the Jazira, Upper Mesopotamia,* *Antiquity* 67, 548–562.

Wilkinson, T. J. – Tucker, D.

- 1995 *Settlement Development in the North Jazira, Iraq: A Study of the Archaeological Landscape.* Warminster.