

Tall Zera'a in the Wadi al-'Arab

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The ruins of the Decapolis city of Gadara fascinate by their archaeological relevance as well as their extraordinary scenic location. The city is majestically sited on the northeasternmost mountain spur of Transjordan high above the Sea of Galilee, jutting out into the Jordan valley. If one looks to the north, the hot springs of *Hammat Gader* in the Yarmouk valley can be spotted. Looking to the west, the view extends from the arable land of the nearby village to as far as Mount Tabor in Galilee. Looking to the south, one discovers an unusually fertile valley: the *Wadi al-'Arab*. Nevertheless, its relevance for the antique city of Gadara and its pre- and post-classical and subsequent development has hardly been paid any attention to until now (Hoffmann 1999). The *wadi* and the trade route running through it are dominated by a remarkable settlement – the *Tall Zera'a*.

For the next ten years an integrated study of the western *Wadi al-'Arab* and the exploration of the urban center *Tall Zera'a* will be the main research work of the Biblical-Archaeological Institute Wuppertal. The regionally oriented formulation of questions and the interplay of various factors within a region and thereby questions relevant to the cultural development of that region covering several millennia – leads to an archaeology of a landscape.

The exploration, excavation and conservation of the antiquities to be found in *Tall Zera'a* will be focal points of the archaeological project. The excavation of *Tall Zera'a* will be realized in a close and trusting cooperation with Dr. Karel J.H. Vriezen (University of Utrecht/Netherlands).

Concerning the exploration of the western *Wadi al-'Arab* the following questions will be central points of interest:

- Generally speaking the investigation of the landscape of the *Wadi*

al-'Arab in its entirety is at stake. In this context the relations between the centre, the *Tall Zera'a* and the surrounding area play an essential role. Particularly it is of interest how the inhabitants adapted their strategies for survival to the given circumstances of the valley in the course of the millennia, that is, how they reacted to changes in their resources. The exploration of agricultural methods, flora and fauna, geology (water, rock formations and soil types), trade (streets, infrastructure) and the strategic significance of the valley will help to fathom the historical development of the *tall*.

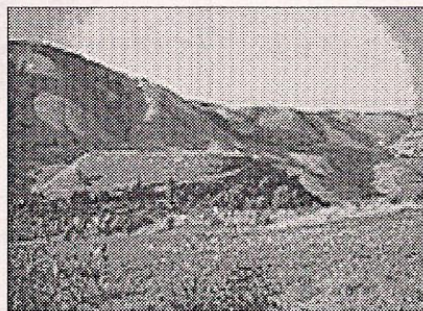


Fig. 1: South view of *Tall Zera'a*, on the mountain spur ancient Gadara (Photo: D. Vieweger)

- *Tall Zera'a* and its neighboring settlements *Khirbet Bond* (map reference according to the 1:25,000 Transjordan Series: 2128.2233, see Hanbury-Tenison 1984, 389, No 007) and *Tall Kinise (Ra'an)* (2191.2271; Hanbury-Tenison 1984, 391, No. 052) have been inhabited for a long time. They left traces of settlement from the Early Bronze Age continuing well into the Arabian Middle Ages. Therefore, within this clearly defined and relatively secluded region significant knowledge about the long-lasting development of settlement can be expected.

- *Tall Zera'a* was a privileged place of settlement in northern Palestine. Consequently, a continuous stratigraphy is expected as a result of the excavations planned on the

tall, which can in turn be used as a referential stratigraphy for the city of Gadara and especially its prehistory and late occupation in the Middle Ages.

- The relation between the urban center of Gadara and its environs will also produce new aspects of the urban history of classical Gadara. The urban centre was dependent on its surroundings. In this respect, problems relating to the social life in the *Gadara/Umm Qeis* region can be addressed in a sensible way.

Results of the first season

A. Survey

The survey area covered the whole *tall* and all its slopes. In all, 127 survey squares of 20 m x 20 m size were examined, i.e., 5.08 ha. Altogether 24 059 sherds (plus many vestiges of Roman-Byzantine roof tiles) were found and catalogued, 22 318 of these in the course of the surface inspection of *Tall Zera'a* and another 1 741 during the survey based on the Portugali-method (15 squares of 5 by 5 m each). Out of the total number of sherds 2 847 were diagnostics. All sherds were evaluated both in quality and quantity.

For exemplary purposes several survey methods were applied: in addition to the complete gathering of all visible artifacts on the surface, a surface exploration was performed according to the guidelines described by Portugali 1981 (which implied the examination of the *tall* surface to a depth of about one shovel). The focus here was on the question of whether the Portugali-method, apart from a quantitative increase in the amount of artifacts, also allowed an essentially different qualitative prediction. Finally, we tested whether the results of the complete *tall* survey could have been achieved without the substantial amount of energy spent, that is, by using

random or directed sampling methods.

First of all the chronological classification of the pottery gathered substantiates a long period of settlement activity on *Tall Zera'a*, which reaches from the Early Bronze Age well into the Ottoman period (we will publish the results of the survey in the Annual of the Department of Antiquities of Jordan and in the Zeitschrift des Deutschen Palästina-Vereins as soon as possible).

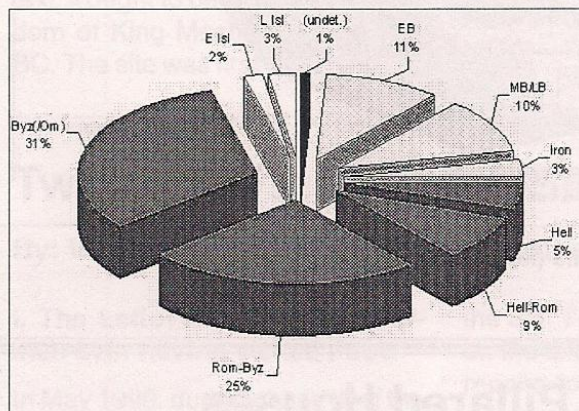


Fig. 2: Chronological classification of all pottery found on *Tall Zera'a* (excluding the Portugali survey).

Geoelectric Tomography

Within the scope of the geophysical exploration of the *tall* geoelectric mapping, two-dimensional as well as three-dimensional tomographic techniques were brought into action in order to

- be able to plan archaeological excavations in advance and to develop exact strategies for the planned excavation,
- acquire knowledge of not-excavated areas also, and
- leave undisturbed larger excavation areas for coming generations.

For the purpose of the geophysical exploration a LGM 4-Point Light iC and a Geolog 2000 GeoTom were used. On *Tall Zera'a* more than 50 profiles in various configurations could be measured. Below there are two outcomes which will be published beforehand:

The first measurement shows a profile (in dipole-dipole configuration) which runs across the *tall* in

an eastwest direction and yields essentially geological insights. For this 63 electrodes were positioned at a distance of 2 m. In the profile shown below a cultural layer of 5 to 6 m thickness can be recognized, showing a low-ohmic value (up to 100 Wm to the max.) below the dried-up surface which, as expected, appears as a high-ohmic anomaly (more than 160 Wm). An important observation of our survey confirms the enormous thickness of the cultural layer of *Tall Zera'a*. The cistern found in the south-east of the *tall*, which has a depth of 5.75 m, reaches up to the actual *tall* surface directly above the cistern's round brickwork arch and is built on bedrock.

In the east, bedrock almost reaches up to the surface. Since the *tall* as a whole slopes slightly toward the east, drainage occurred in that direction. – Probably the remarkable down-going double-conic (low-ohmic) area at meter 32.0 is connected with the functioning of the artesian well.

On the west slope about 20 parallel placed profiles were plotted and measured with 50 electrodes at 0.5 m distance. Here the dipole-dipole configuration was used as well in order to ensure a better resolution of the screen process prints. In this way, a location of the walls on the *tall's* slopes should be possible. On the surface they cannot

be localized. In the model illustrated below two high-ohmic anomalies can be traced at meter 4.0 and 11.0, lying up to 2 m below the surface. Since these anomalies occur in all 20 parallel profiles, it can be assumed that they are related to the remains of wall structures. Detailed analyses – especially the three-dimensional modeling of measurement values – are currently under way.

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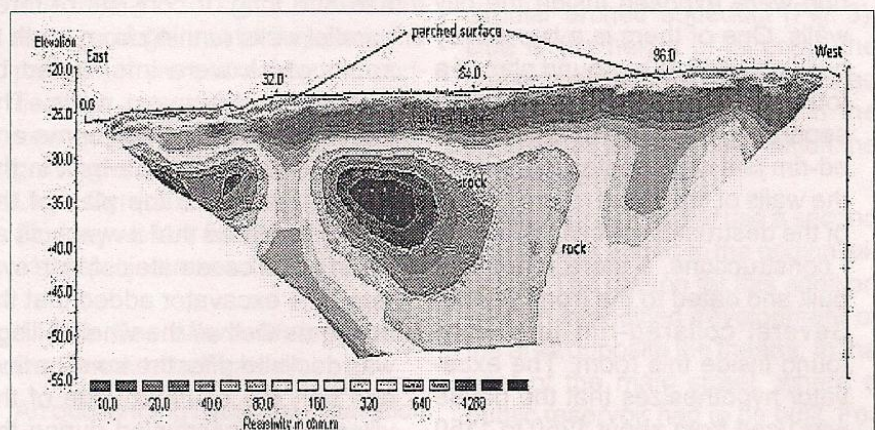


Fig 3: East-west profile of the *tall* plateau (Iteration 4, RMS-fault = 24.5)

The joint planning of investigations in the Umm Qeis region and the simultaneous realization of archaeological projects with the Deutsches Archäologisches Institut Berlin (Dr. Günther Schauerte; Dipl.-Ing. Claudia Bührig) proved to be a success.

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References

Hanbury-Tenison, J.W., Wadi Arab Survey 1983, Annual of the Department

of Antiquities of Jordan 28, 1984, 385-424. 494-496.

Hoffmann, A., Gadara – Stadt und Umland, in: Schwandner, E.-L.; Rheidt, K. (ed.), Stadt und Umland. Neue Ergebnisse der archäologischen Bau- und Siedlungsforschung, Diskussionen zur Archäologischen Bauforschung 7, Mainz 1999, 223-236.

Portugali, J., A Field Methodology for Regional Archaeology: The West Jezreel Valley Survey, Tel Aviv 31, 1981, 170-190.

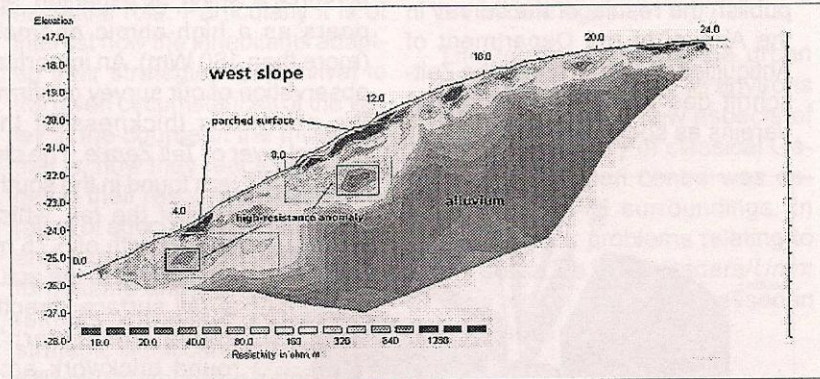


Fig. 4: West slope profile (Iteration 4, RMS-fault 12.9)