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Reviewed Article:

Get into the Grave: Notions of Community Social Identity in a Late 3rd Millennium Site, Derived from an Experimental Carving of a Shaft Tomb at Ramat Bet Shemesh (Israel)

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Khirbet el-Alia is a large mound, located north-east of Tel Yarmouth, in the Ramat Bet Shemesh region of Israel. An excavation that was conducted north of the mound revealed the

remains of a settlement and an adjacent cemetery of shaft graves, dating back to the Intermediate Bronze Age (IBA). The excavation yielded important notions on the material culture as well as on symbolic realms, group identity and social differentiation of the settlers in this site. One of the main characteristics that reflected these issues was the variety in the efforts and resources invested in carving the shaft tombs. In order to investigate this phenomenon of conspicuous consumption of human labour and to understand and explain its social implications on late third millennium society, we used experimental archaeology, thus we carved our own shaft grave, documented the work in progress and interpreted its results and the socio-economic implications on this ancient society.

> The experiment we conducted at KAN reflects aspects of social mechanisms that were in action during the late third millennium BC. The creation of a shaft tomb dictated careful pre-planning, a close survey of rock formation and topography, a moderate use of water and of course an investment in human labour.

Khirbet el-Alia north – natural settings and history of research

Khirbet el-Alia is one of the major mounds that are located in the Ramat Bet Shemesh region of Israel (See Figure 1). The mound is located approximately1 km north-east of Tel Yarmouth, north of the Yarmouth stream, and is c. 4.8ha in size. The mound and its immediate vicinity was extensively surveyed by Y. Dagan and other scholars, with excavations conducted east and west of our newly excavated area (Dagan 1998; 2010, site 205). In the scope of the Ramat Bet Shemesh project which aimed to explore and document archaeology before modern development, various trial activities took place, including trial trenches, a thorough survey and salvage excavations. These activities, conducted on behalf of the Israel Antiquities Authority, yielded remains from most of the periods from the PN (sixth millennium BC) to the Ottoman period (1516-1917 AD). The Intermediate Bronze Age (c. 2300-2000 BC) is not represented in the mound (Dagan 1998; 2010: 156-157). On the other hand, remnants of several settlement points were found during the project; some were defined as 'find spots', others represented larger occupations, all of them were located north and north-east to Kh. El-Alia (Dagan 2011, 245-246). The spatial distribution of the various excavated points cannot tell the existence of one vast settlement nor the scatter of small farm-houses and villages. What is clear is that the Intermediate Bronze Age people preferred the lower rocky shelf that descended north to Kh. El-Alia, where water sources and fertile soils were close by.

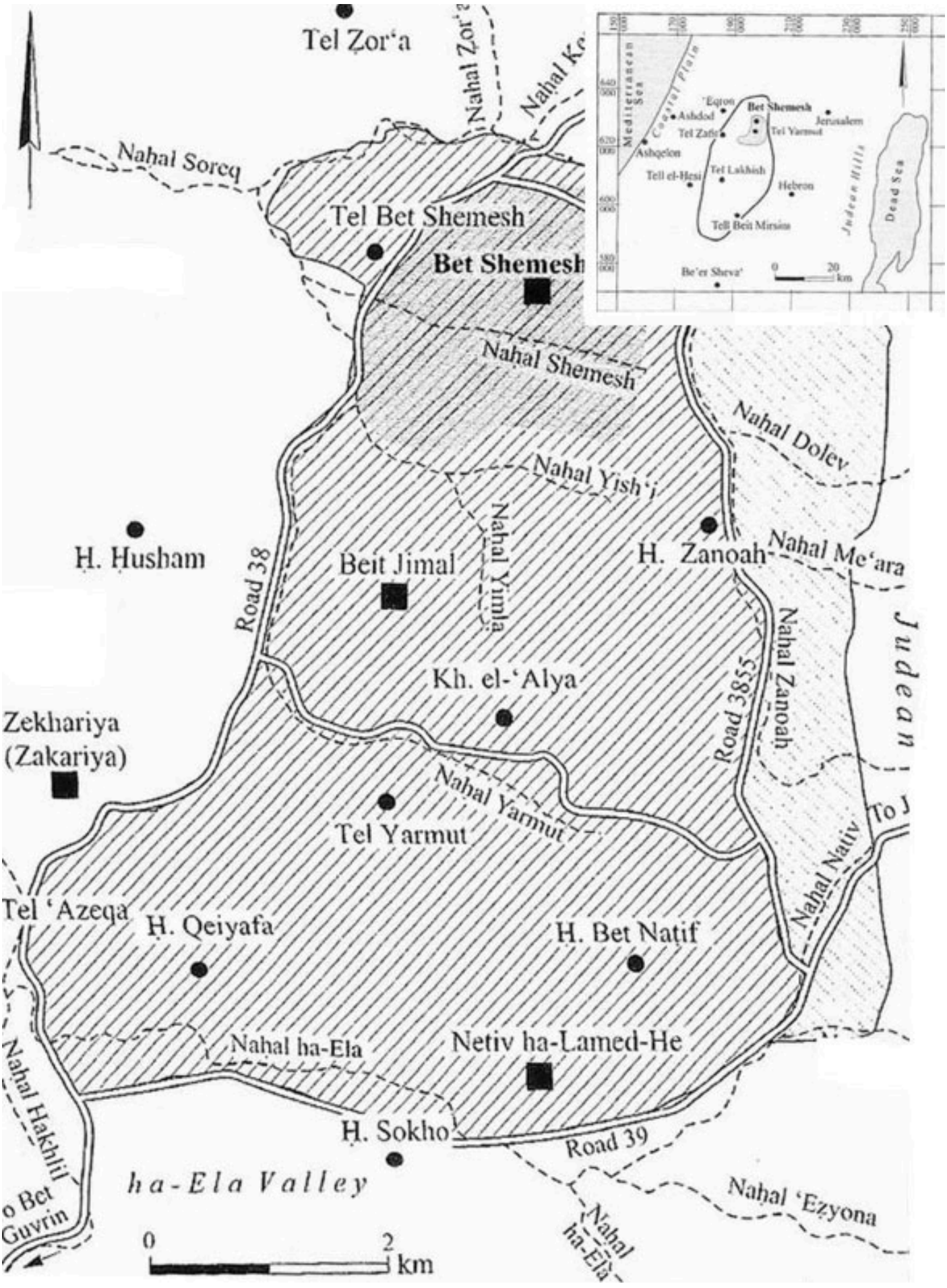

FIG 1. KH. EL-ALIA AND THE NORTHERN EXCAVATED AREA IN THE RAMAT BET SHEMESH MAP AFTER DAGAN 2010: FIGURES 1.2 AND 1.3, COURTESY OF THE ISRAEL ANTIQUITY).

The area north and north-west to Kh. El-Alia, the focus of the current article (henceforward KAN) is characterized by a wide lime-stone shelf (at least 200 m wide) that descends rather sharply northwards towards the tributaries of the Yimla and Yishi streams. The bedrock is highly un-even and is characterized by natural formations that took the shape of straight lines, curving lines and deep holes and depressions. The geo-morphology of the natural lime-stone bedrock included two layers: the upper hard *Nari* layer, and below, the softer *Kirton* layer. This was one of the factors that affected the IBA settlers when creating their rock-cut cemetery, though not their only consideration.

The cemetery of shaft graves was pre-planned and included two main sectors: an eastern sector, adjacent to the settlement, and a western sector, more remote from the settlement (see below).

The inhabitants of the settlement (not discussed in the current paper) on the same descending rock-shelf adjusted it to their needs. They filled the gaps and cut through the rock in order to create straight surfaces above which they could situate their walls. In general, it seems that the settlement was established on lower ground compared to the cemetery.

One should note the uniqueness of the excavation: in most cases where Intermediate Bronze Age sites were discovered in the land of Israel, they were either settlements or burial grounds. There are almost no sites where a burial ground was discovered side by side with the settlements and in this sense, KAN stands out, giving us the opportunity to explore aspects of material culture from both occupation and mortuary contexts.

Unfortunately, the settlement was not widely explored. On the other hand, the cemetery was fully explored – 250 shaft graves were excavated and documented. Even though most of the graves had previously been robbed in antiquity, leaving scant evidence of mortuary habits, the data that was collected from the graves has furnished us with very important knowledge that sheds new light on the IBA settlement and cemetery and the symbolic realm of its inhabitants.

The cemetery – general traits

The cemetery that was excavated at KAN included 250 tombs, all of them belonged to one type that was common during the late third millennium BC in the southern Levant, that is, the shaft tomb – a system comprised of a shaft that led into a burial chamber. The burial chambers were oval shaped and were carved horizontally into the chalk layer from the bottom of the shafts, creating a kind of a step so that the floor of the chamber was 5 to 15 cm bellow the bottom of the shafts. Both features were carved in bedrock; the shaft pierced the harder Nari, while the chamber was carved in the softer Kirton (See Figure 2).

Variety in the investment in tomb building

The data available to us point to a clear differentiation between the eastern and western parts of Area A, in the investment in both the shafts depth as well as on the leading complex.

Many of the shaft tombs at the eastern side of the cemetery were complex. They included open spaces that were created by the use of natural rock formations which were adjoined by man-made rock-cut lining (Paz 2014). These spaces led to very deep shafts that were oval or rectangular in shape; their diameter reached 2.5 m.

Among the more lavish shaft tombs of the eastern side of the cemetery were six elaborate systems, two of them reached monumental characteristics (See Figure 3).

The western part of the cemetery, on the other hand, was generally characterized by shaft tombs that reflected much less investment in human labour and resources, as reflected by shallow shafts (0.50-0.70 m average deep) and rather modest size burial chambers.

The eastern part of the cemetery finds almost no parallels in the western side and there can be little doubt that this differentiation bares some implications on the way we should interpret social relations within the IBA settlement.

Thus, the more elaborate tombs of the eastern side of Kh. El-Alia, in which extra force was invested, may have been created for high status personae (see discussion below).

Methodology

The experiment was aimed to create a shaft tomb that may reflect an average between the most impressive and elaborate shaft tombs of the eastern side of the cemetery and between the modest shallow shafted tombs. This average was most common at the cemetery (circa 40% of the shaft tombs can be considered as 'average' in size , (that had a shaft that was up to 1 mdeep, 1 m in diameters and a burial chamber that was up to 2 m in diameter) and thus represent moderate investment in carving) and thus it was decided to carry out the carving of this size of a shaft tomb.

The experiment took place in nine days between the 9-20 February 2014. Three workers were employed, working for more or less eight hours a day, with half an hour break for rest and breakfast. The workers used hand tools that are common in archaeological excavations. For carving the rock they used large and small pick-axes (all pick-axes had wooden handles and iron blades, we deliberately used worn-out tools with dull cutting edges in order to create the closest comparison to ancient tools, though we had no bronze or flint tools for the task) and in order to clean the rock waste they used shovels, spades and buckets. The following account documents each day of work and the various issues that accompanied it (See Figures 4-10).

Day 1: The starting point for the carving of the shaft was chosen, a cavity full of erosion soil and small stones in the Nari layer. The first activity was to clean the cavity of soil and stones and to prepare the point for the shaft carving. This work took circa two hours, after which the rounded shape of the shaft was found to be ½ m in diameter. The carving of the shaft was conducted by one worker, using a large pick-axe. The other two workers cleared the waste. The workers changed their roles from time to time due to physical reasons; the hard work of carving in the hard Nari layer and the narrow space within the created shaft. In the two hours of work, only 0.30 m of rock were carved.

Day 2: The workers continued to create the rounded shaft, excavating in the hard Nari layers and cleaning the waste for circa eight hours. The workers commented that the hardest task was to carve the rounded shape of the shaft and to make a straight vertical wall for the shaft. By the end of this day, the shaft was filled with 40 l of water that were aimed to soften the rock and to make carving easier on the next day. The workers had advanced 20 cm below the previous level.

Day 3: The water that was poured into the shaft the day before was dried out. Working inside the shaft proceeded, with the workers reporting that physical efforts were not easier as a result of water, as it seems not to have softened the bedrock. Another 30 l of water were poured into the shaft at the end of this day. The workers advanced 18 cm deeper into the bedrock.

Day 4: As with the day before, water in the shaft did not make the rock much softer and work proceeded with great effort. This time, 5 l of water were poured into the shaft every 1.5 hours. This made work a bit easier. The shaft was deepened by 21 cm by the end of the day.

Day 5: This day, a new method was employed by the workers. They used iron pegs that were nailed into the shaft's bottom and then removed (in antiquity, large flint objects or bronze pegs could have been employed, though we have no evidence for this activity). Water was then poured inside the holes. Workers reported that this method was more effective; the water that penetrated deeper into the rock layers softened it and made work easier. Nineteen centimetres of bedrock were carved and the shaft completed, as the soft chalk (Kirton) layer was revealed under the hard Nari.

Day 6: This day, the workers started carving the burial chamber. The workers chose to carve the chamber in the southern wall of the shaft for security considerations. In the southern wall, no natural cracks could be seen and it was assumed that carving a chamber in this direction would still leave a rather thick and safe ceiling.

The workers examined IBA burial chambers at the site and then started shaping the entrance of the burial chamber. Afterwards, they started carving into the chalk to create the chamber, replacing one another over time due to physical strains (hands and knees aches).

By the end of the day, the workers carved 35 cm deep into the chalk layer.

Days 7-9: Work continued on the carving and shaping of the burial chamber. The physical strains were hard and thus the excavators changed every half an hour. By the end of the ninth day, the burial chamber was circa 1 m in diameter and its ceiling was circa 70 cm high at its maximum point.

Spatial and social aspects that arise from the excavation of the cemetery

The orientation of the burial chambers in the majority of shaft tombs shows a preference of carving them east to south-west (42 in total) and less so west to north-east (eight in total). The direction in which the chamber was chosen to be carved could have been influenced by the slope topography. Another possibility is that the orientation was traditional. This seems likely due to the location of Kh. El Aliyah to the south east of the cemetery.

All of the above clearly demonstrates the importance of rock cutting styles and techniques as reflections of group identity and social structure at KAN.

In her thorough research on the cemetery and settlement at Jebel Qa'aqir, G. London describes a planned cemetery, in which the placement of the tombs was carefully designed. One of her important observations was that the older segments of the population were well treated in death, and there was a clear correlation between the depth of the shafts and the age of the deceased. In other words, the older the deceased was, the deeper the shaft, and of course, the investment in tomb preparation (London 1985, 287).

In an article that discusses the burial customs of the Jericho cemetery, Shai (1983) points out that burial chambers for women were located at the western side of the shaft, while older women were buried separately from the other community members. Shai explains this situation in relation to their independent social status (possibly as widows), versus young reproductive women that were buried with the rest of the group (Shai 1983, 31). She concludes that social affiliation was much more important that social status and identifies the Jericho society during the Intermediate Bronze Age as an egalitarian society (Shai 1983, 36).

A different view is posed by Baxevani (1995), who highlights the sharp difference between Early Bronze Age (EBA) and IBA societies through mortuary practices: while EBA complex and unequal society demonstrated this trait through communal burials that show little or no status difference, the differentiation between high status and lower status burials do reflect a society that maintained a certain degree of complexity, and a prevailing elite who had different access to resources (Baxevani 1995, 94-95).

Turning back to Kh. El-Alia, the unfortunate scarcity of physical anthropological data may be compensated a bit by the study of the tombs carving technique and their immediate surroundings. Being extra cautious with our interpretation, and keeping in mind London's,

Shai's and Baxevani's criteria, we could possibly predict what and who will be found inside the tomb. The data available to us does enable us to reconstruct two main flanks of the cemetery – an eastern flank, closer to the settlement, that was defined by lavish shaft tombs in which high status personae were buried and a western flank, defined by more modest tombs that were probably prepared for the rest of the population.

The fact that no social differentiation was observed in the settlement (Area B) may reflect a reality that prevailed in other settlements that were found throughout the land of Israel (for example see Eisenberg 2012; Milevski 2012; Gophna 1992), that social differentiation was expressed in death rather than during lifetime. On the other hand, the lack of evidence for social differentiation within the settlement may result from the very limited size of the excavated area (three squares, less than 10% of the estimated size of the settlement), and, as will be shown below, the cemetery does reflect at least clues for social differentiation that was expressed already during life time of some personae (see discussion below).

It was proven without doubt that a standard shaft grave (typical to the cemetery of KAN) can be carved in a period of nine days, by no more than three people, using plain tools that were probably similar in shape to those used during the late third millennium BC (one should note that during our experiment, iron blades were used to carve the graves while during the third millennium BC, copper or flint tools were in use. It is important to stress that the blades used by us during our experiment are not necessarily harder than ancient flint blades, especially adzes that appear to be highly sustainable. Considering the possible differences between modern day and antiquity in tool technologies, we may reconstruct a period of ten days of work for an average shaft tomb. It can thus be suggested that the elaborate monumental systems of the eastern side of the cemetery were created by more people who worked for longer periods. A reconstruction of ten people working for a period of 15-20 days seems plausible.

It seems most plausible that the conspicuous consumption of human labour that was employed to create the shaft tombs was triggered by notions and ideas of group identity that considered the act of rock carving as a mean to create and accelerate group identity. As such, the manipulation of human force and its shift from agricultural production to ‘grave carving’ must have been pre-planned. One cannot accept a possibility that the shaft tombs were only carved by the relatives of a person who had just passed away. It is much more tempting to assume that the cemetery was planned and that most graves were created well before people passed away. The shape, size and monumentality of the grave was probably connected to the social status of the deceased. The fact that even 'average' shaft tombs were carved in no less than nine days each does testify for the possibility that at least a major part of the cemetery was pre-planned. Moreover, the vast majority of the 250 tombs that were excavated seldom show any interference, meaning, that new tombs almost never cut into earlier ones. The community's aim to keep early burials un-touched by new ones may be one

of the reasons for carving the burial chamber in one main direction (in KAN, southwards). This way of planning was known in other cemeteries dating from the Intermediate Bronze Age (see, for example, at Bet Dagan, Yannai 2011).

It is thus suggested that the cemetery was established according to one master-plan that was divided in advance to two main parts: eastern, closer to the settlement, in which high status personae were to be placed, and western, for common people.

At any rate, the experiment we conducted at KAN reflects aspects of social mechanisms that were in action during the late third millennium BC. The creation of a shaft tomb dictated careful pre-planning, a close survey of rock formation and topography, a moderate use of water and of course an investment in human labour. The rather modest sized shaft tomb that we carved in nine days encompassed a whole set of thoughts, considerations, decisions and actions, all of which were shared by ancient people. There can be little doubt that the mere act of carving a shaft tomb was an act that helped to strengthen group identity, and as written by Furholt and Muller,

> *"What is more, the very process of the construction of monuments is to be seen as a ritual, as a joint collective activity creating and fostering identification, creating and practicing social identities"*
> (Furholt and Muller 2011, 17).

Keywords grave
limestone
construction of building

Country Israel

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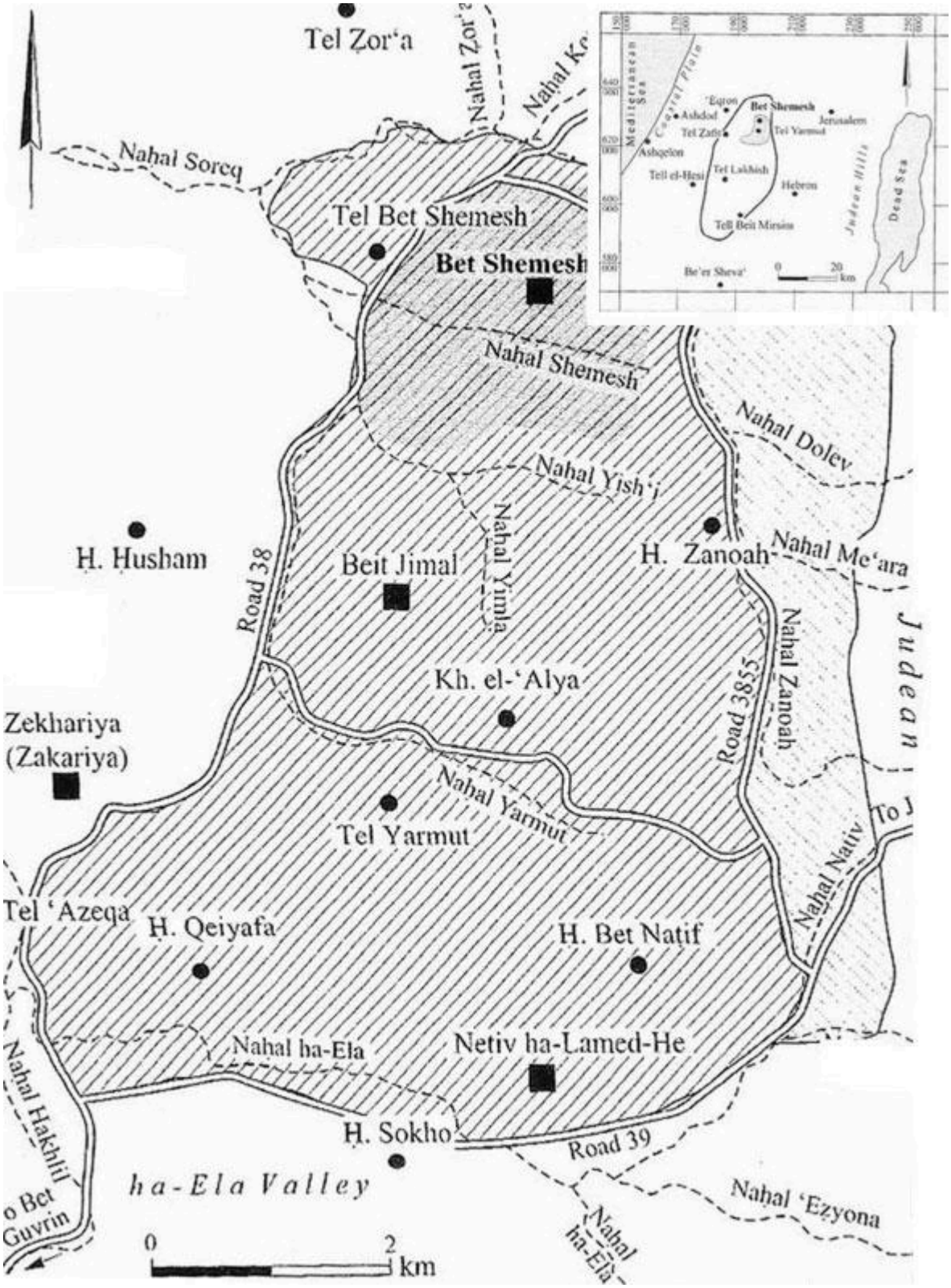

FIG 1. KH. EL-ALIA AND THE NORTHERN EXCAVATED AREA IN THE RAMAT BET SHEMESH MAP (AFTER DAGAN 2010: FIGURES 1.2 AND 1.3, COURTESY OF THE ISRAEL ANTIQUITY)

FIG 2. ATYPICAL SHAFT TOMB AT KAN, A VIEW FROM THE SHAFT TOWARDS THE BURIAL CHAMBER (PHOTO BY A. PERETZ, COURTESY OF THE IAA)

FIG 3. ONE OF THE TOMB SYSTEMS CARVED AT THE EASTERN SIDE OF THE CEMETERY AT KAN (PHOTO BY A. PERETZ, COURTESY OF THE IAA)

FIG 4. THE CHOSEN LOCATION FOR OUR EXPERIMENTAL SHAFT TOMB, A NATURAL ROCK CAVITY (COURTESY OF THE IAA)

FIG 5. WATER BEING POURED INTO THE SHAFT IN ORDER TO SOFTEN BEDROCK (COURTESY OF THE IAA)

FIG 6. CAREFUL CHISELLING WITH A SMALL PICK-AXE GIVES A ROUNDED SHAPE TO THE SHAFT (COURTESY OF THE IAA)

FIG 7. IRON PEGS WERE BEING HAMMERED INTO THE SHAFT'S FLOOR TO ENABLE WATER TO SOFTEN BEDROCK (COURTESY OF THE IAA)

FIG 8. AFTER THE SHAFT'S CARVING WAS FINISHED, THE 'BURIAL CHAMBER' WAS CREATED (COURTESY OF THE IAA)

FIG 9. THE 'BURIAL CHAMBER' AT THE BEGINNING OF ITS EXCAVATION (COURTESY OF THE IAA)

FIG 10. THE EXPERIMENTAL SHAFT TOMB AFTER NINE DAYS OF WORK; A VIEW FROM THE SHAFT TOWARDS THE 'BURIAL CHAMBER' (COURTESY OF THE IAA)