

The 2002–2004 excavations at Gesher: An anthropological perspective

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1. General information about the site

Gesher is located in the central Jordan Valley, on the southern bank of Wadi Tabor, about 14 km south of the Sea of Galilee. The area of the site is placed on a steep slope of a low hill, adjacent to the flat bottom of the valley that is heavily used for agricultural purposes. The site's name derives from an old Ottoman rail bridge (Heb. *gesher*) and the kibbutz located nearby that bears the same name.¹

The site was discovered in the late 80s by the Israeli Defense Forces (IDF) while cutting a road into the hillside, thereby uncovering the remains of few burials in the process. The analysis done on the pottery and other archaeological remains revealed two phases: Neolithic occupational material and Middle Bronze Age IIA burials (Hess 1990).

2. History of excavations

The first regular excavations on the site were held in 1986 and 1987, by a team from the Institute of Archaeology of Hebrew University of Jerusalem, directed by Dr. Yoseph Garfinkel. They revealed an occupational area and settlement, dated to the Pre-Pottery Neolithic A, i.e., to the beginning of the eighth mil-

Note: This article is the preliminary anthropological report from two seasons of excavations in Gesher (2003 and 2004). For the full publication of the 2002–2004 excavations at Gesher, see Cohen, in press.

¹ The site is actually located on the fields of Kibbutz Neve 'Ur, and this name appears sometimes in the literature.

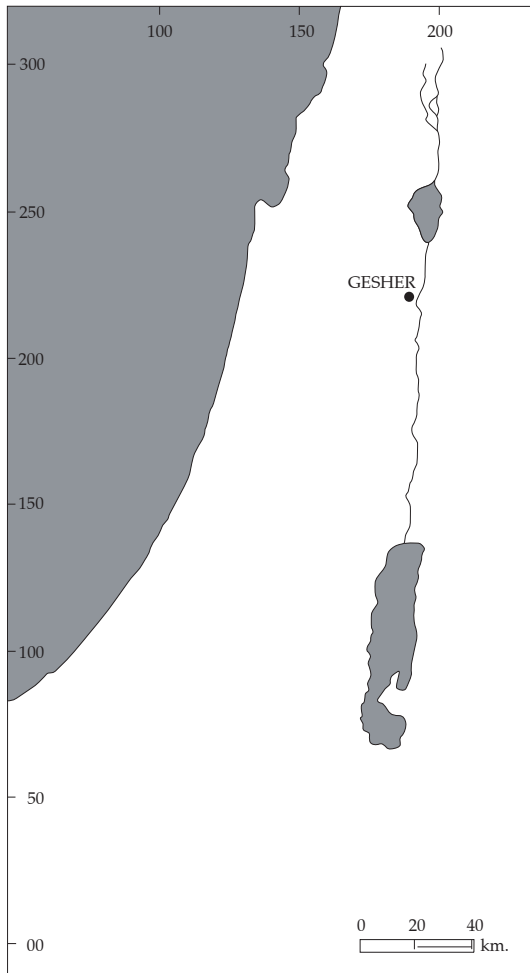


Fig. 1. Location of the site.

a larger team and for an extended period of time. During these two seasons, excavations uncovered eight burials and their associated grave goods (Cohen 2003b; in press). The description of the skeletal remains in these burials is the main focus of this article.

3. Description of the burials and anthropological analysis of the human remains

Most interments at the site are single, primary burials, although one from the '86-'87 seasons has two individuals, and there are also several secondary burials. It appears that the burials were dug as shaft tombs into the hillside. After the interment of the dead and placement of the grave goods, the chamber was sometimes sealed with some large stones (which are not a usual phenomenon in this soil) and the shaft was filled with the same sediment that had been

lennium BCE, as well as thirteen burials dated from the early Middle Bronze Age IIA cemetery. Based on ceramic typology, the burials were dated to the beginning of the twentieth century BCE. One radiocarbon date established from analysis of a piece of wood from Grave 13, yielded a date of 3640 ± 70 BP (sample code: OxA 1955), that transfers into a date of 2138–1907 BCE (Garfinkel and Bonfil 1990).

In the summer of 2002, excavations at the site were re-opened under the direction of Dr. Susan L. Cohen on behalf of Montana State University. The 2002 season was a short, preliminary one, with the main goal to establish if there were still MB IIA burials to be excavated and analyzed. No complete burial was found during these excavations, although a few complete pottery vessels in the fill and traces of some human bones in the vertical side of the road-cut indicated the existence of additional undisturbed burials (Cohen 2003a).

The excavations were continued in summers 2003 and 2004 with

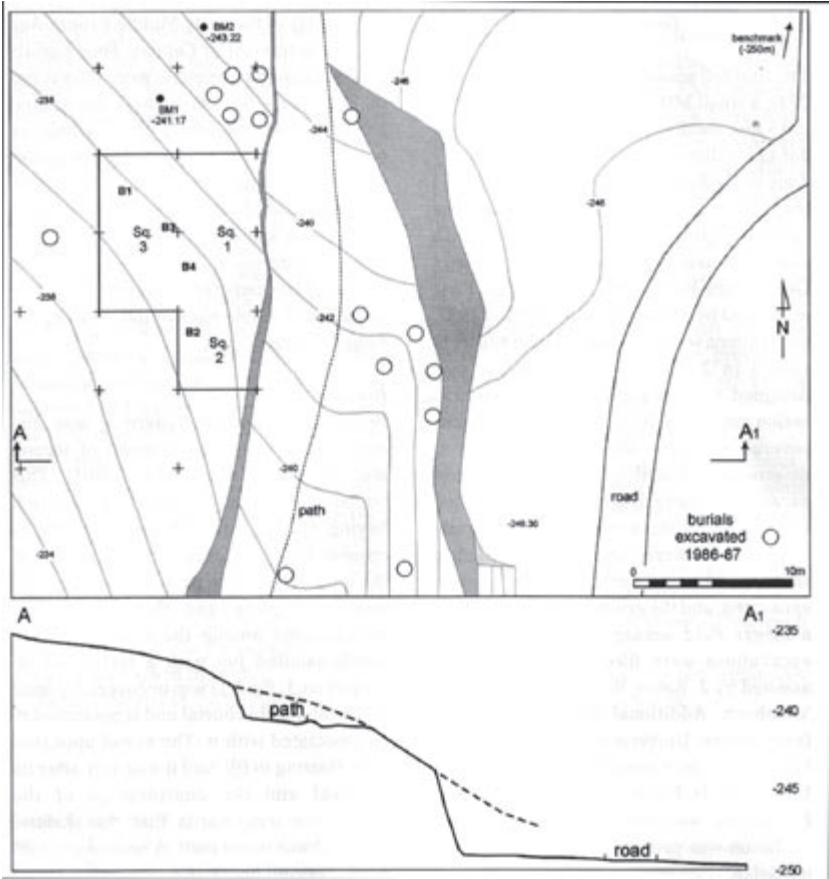


Fig. 2. Plan of the site.

removed while digging the grave. Over the time the chamber caved in, and because of the short period between those two events (digging and caving in) and the use of the recently excavated soil to fill the shaft, discernment of the shaft and grave layout within the surrounding matrix during excavations proved to be impossible. The only sign of the burial chamber in the soil at the time of excavations is the presence of stones (if the chamber was indeed sealed with them), grave goods (pottery, bronze objects, animal bones) or the skeletons themselves (Garfinkel and Bonfil 1990).

The human bones at the site are in an extremely poor state of preservation. The only time to observe their full shape is right after exposure, before removal, limiting the information that can be obtained concerning the remains. After the interments were exposed, but prior to further excavation and removal of the material, the skeletal material was examined for completeness and to determine information about their morphological characteristics in order to establish the sex and age of people buried at the site.²

² All skeletal examinations in the 2002–2004 excavations were conducted in the field by the project anthropologist W. Więckowski.

Season 2003

There were four burials excavated during the 2003 season of excavations at the site.³ Because of the lack of the possibility to discern the layout of the shaft and the burial chamber, as noted above, the only way to establish if the burial is, or is not, primary, is the completeness and articulation of the skeletons. Burials 2, 3 and 4, from the 2003 season consisted of articulated skeletons, and therefore they are considered to be primary burials, while Burial 1 is considered secondary.

Burial 1

Burial 1 contained only fragments of the cranium and some long bones which were placed in a pack. The nature of the deposit indicates that it was a secondary deposition. The bones were packed together, with the cranium lying on the long bones (both of which are quite easy to collect), and the configuration of the bones, which shows some typical features that are usually present when a skeleton has been uncovered and re-interred.⁴ It is possible that the bones were found while digging another tomb, intentionally collected, and placed into a secondary grave.

Bones present: cranium – pieces of the cranial vault (i.e. pieces of the frontal, parietal, occipital and temporal bones), small fragments of the face bones and teeth. *Post-cranial skeleton* – fragments of the shafts of the long bones from the upper and lower extremities. *Teeth* – 8 fragments: incisor, two canine teeth, two premolars, one root fragment of the premolar, two molars (second upper left and right). The incisor's crown was worn almost to half of its height; the cusps of the other teeth were worn also.

The morphology of the preserved fragments, primarily from the long bones and the diagnostic features on the cranium, shows that the person was male. The estimated age should be *adultus/maturus*, over 35 years old (estimated on fragments of obliterated *sutura sagittalis* and the tooth wear).

Burial 2

This burial consisted of the remains of a skeleton in primary deposition. The body was laid on the right side, with the head to the south-east, and flexed. While almost all anatomical regions of the skeleton were present, they were, however, in a very poor state of preservation. Some of the bones had apparently dissolved completely and were not present, as well as almost all joint areas.

Bones present: cranium – fragments of the cranial vault (parietal, temporal and occipital bones fragments), the face was not preserved except for the mandible and some teeth with small fragments of the upper jawbones. *Post-cranial*

³ For information concerning the human remains from the 1986 and 87 seasons see Garfinkel and Bonfil 1990.

⁴ Only the main long bones of the body were present (i.e., a few pieces of the femora, tibiae, humeri and possibly other bones of the lower arm and lower leg), which are easy to collect, as well as the cranium, which had been placed on the top of the other bones.

skeleton – fragments of the cervical vertebrae, left clavicle, some fragments of the rib bodies, scapula, upper and lower arm bones (humeri, ulnae, radiae), possibly some fragments of the metacarpal bones as well as phalanges; traces of the innominate bones, both femora, tibiae and the left tibia, were also present. *Teeth* – one upper incisor, one lower incisor and two lower left molars, slightly worn (just on very top of the cusps).

The morphology of the preserved parts of the cranium (especially the occipital part and mandible), as well as the delicate structure of the post-cranial bones, suggests that the sex of the deceased was possibly female. The age could be estimated as *juvenis*, around 16 to 20 years.

Burial 3

This burial consisted of an extremely poorly preserved skeleton that was laid on the right side, with the head to the south, in a flexed position.

Bones present: Cranium – very small pieces of the cranial vault and the facial part were present, as well as some teeth. *Post-cranial skeleton* – a few fragments of the humerus' shaft, a few fragments of the lower arm bones (ulna and radius), left femur and tibia, right tibia. The rest of the skeleton was dissolved completely. On the fragment of the tibia's shaft some pathological changes of the bone surface could be observed, possibly as a result of some kind of inflammation. *Teeth present* – four fragments of two upper and one lower incisors, two crown fragments of the canine teeth, two lower right premolars. All were worn.

Due to the extremely poor state of preservation the information that could be obtained was very limited. However the morphology of the femur shaft suggests the individual was male. Age could be estimated only on the teeth wear and was *adultus/maturus*, possibly over 40.

Burial 4

This was a well-preserved skeleton (in comparison to the other burials uncovered on the site), laid on the right side, with the head to the south, in a flexed position.

Bones present: cranium – when uncovered the cranium was almost intact, although the post-mortal deformation of it, due to the post-depositional processes, made taking measurements impossible. All of the cranial vault bones were present, as well as most of the facial bones (except the mid-face bones, i.e. parts of the upper jawbones). Almost the entire set of teeth was present.

Post-cranial skeleton – a few pieces of the cervical vertebrae (*atlas*), parts of the clavicle, a few pieces of the rib bones, left humerus, parts of the left ulna and radius shafts, a few pieces of carpal bones, parts of metacarpals and phalanges, large parts of the innominate bones, an almost intact left femur, the distal end of the right femur, right patella, and proximal fragments of the tibiae and fibulae. Part of the skeleton left in the west subsidiary baulk in 2003, consisted of a few pieces of the pelvis, proximal part of the right femur, large parts of the

right tibia and fibula, poorly preserved remains of the right foot tarsal, metatarsal and phalanges, distal part of the left tibia, few pieces of the left fibula shaft, tarsal bones, poorly preserved metatarsals and phalanges. These portions were excavated in the 2004 season. *Teeth present* – all of the teeth were present, although the lower canine teeth and premolars were preserved only as roots on the left side in the fragment of the mandible body. Some cavity changes could be observed on the upper left canine and premolar teeth.

The diagnostic parts of the cranium (for instance the orbital part of the frontal bone, mastoid process, chin region of the mandible), as well as the morphology of the post cranial skeleton clearly mark the male sex. The age could be estimated due to the teeth wear and the suturae obliteration, and should be from the *adultus* stage, around 30 years (possibly older).

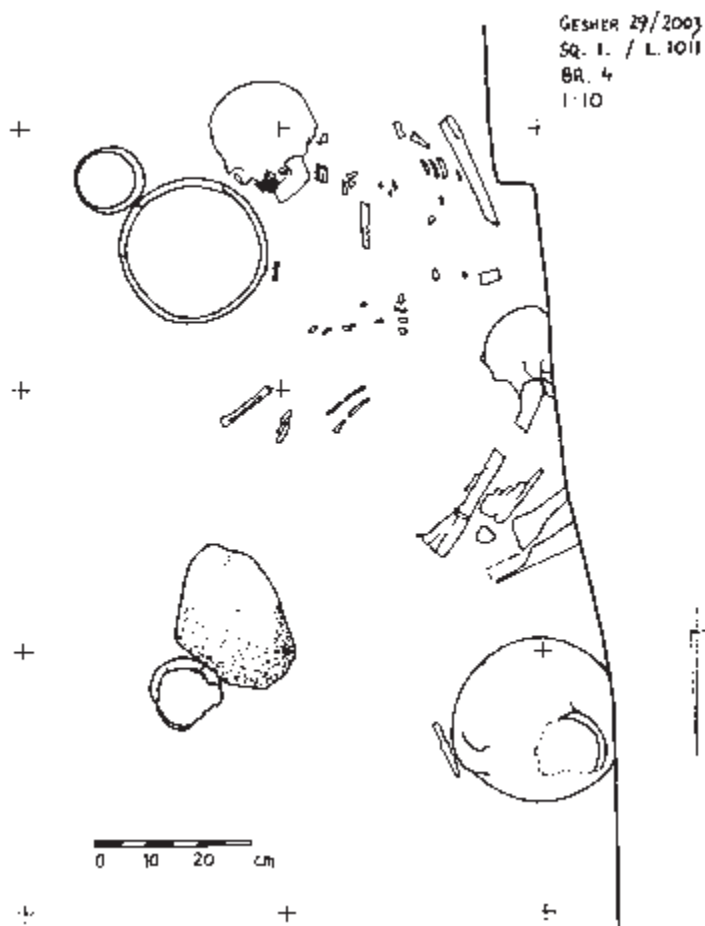


Fig. 3. Burial 4.

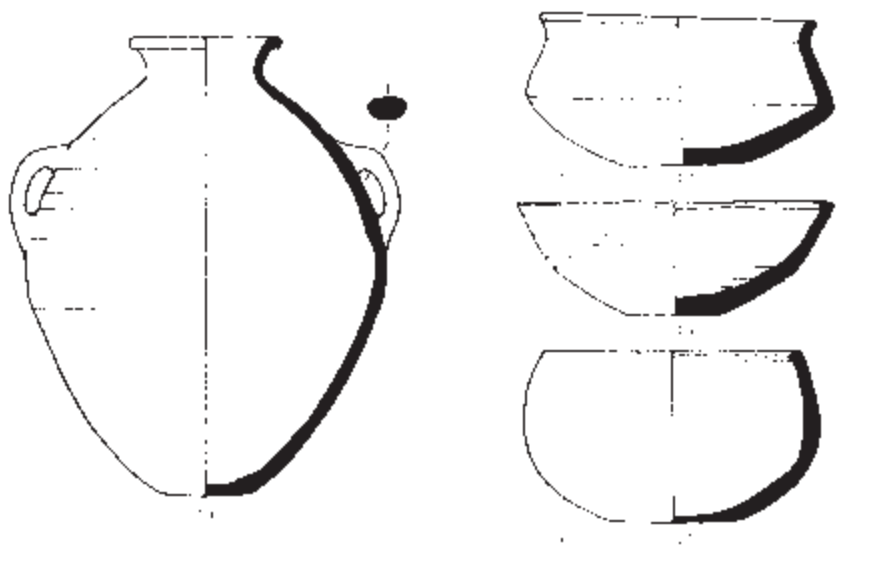


Fig. 4. Pottery from Burial 4.

Season 2004

There were four burials unearthed and excavated in the 2004 season. In addition, the last remains of Burial 4, that had been left in the subsidiary west baulk from the 2003 season, were excavated in 2004. Of the four burials, three were primary depositions and one was clearly secondary.

Burial 5

From the articulation of the unearthed bones and their way of deposition, Burial 5 was clearly a secondary deposit, resembling Burial 1 from the 2003 season. It is possible, however, that the time between the first and the second deposition was rather shorter than in the previous case, as most of the bones of Burial 5 were present, with only small bones from hands and feet absent. The skull was placed on top of the pile of long bones and other parts of the skeleton, with the mandible in between.

Bones present: cranium – most of the *neurocranium* was present, although in many pieces. The face was heavily damaged; the mandible was almost intact but in two separate pieces. *Post-cranial skeleton:* both femora and tibiae, right humerus (in several fragments), left ulna, left side of the mandible (with teeth), poorly preserved pieces of pelvis and scapula; a few rib fragments were deposited in the upper layer, and in the lower – several rib fragments, clavicle, pieces of the upper and lower arm bones, right side of the mandible (with teeth).

Examination: distinctive parts of the skull (*processus mastoideus*, *os occipitalis*) and of the mandible (*protuberentia mentalis*) as well as of the morphology of the postcranial skeleton shows that it belonged to a male individual, *adultus*.

Burial 6

This burial was in an extremely poor state of preservation. The bones were almost dissolved, and were visible only while articulating them *in situ*. Despite that, it was possible to identify almost the entire skeleton.

Bones present: cranium – pieces of the *neurocranium*, traces of the face (one tooth present). *Post-cranial skeleton:* left humerus, left ulna and radius (pieces of the shafts), some rib fragments, pieces of the clavicle and possibly of the scapula, very poorly preserved fragments of the pelvis, both femora. The left tibia was in the correct anatomical position, and the right was moved out of position; some pieces of the metatarsals and phalanges were also present. No traces of the back bone were found.

Examination: overall dimensions and morphology of the bones suggest that it was the interment of the female individual, adult.

Burial 7

This burial was extremely poorly preserved, and seems to have been partially removed by the road cut. While cleaning the eastern subsidiary baulk of Square 1, some leg bones were collected from the eroded area.⁵

Bones present: cranium – no traces of cranium were found with this burial.

Post-cranial skeleton: some parts of the rib cage (both left and right), part of the right radius (?), part of the left arm bone (?), the upper part of the sacrum, a few pieces of the pelvis, shafts of both femora, and some very small chips of the shafts of some long bones.

Examination: This state of preservation of the skeleton precluded definitive analysis regarding the sex and/or age of the individual. There are, however, some observations that are worth mentioning. First of all, this burial had a spearhead as a grave good; this suggests it was a male individual. This would correspond well with the characteristics of the bones from the eroded part of the burial, as some parts of the back of the femur showed male features. The absence of the most of the skeleton, including the skull, could suggest that the individual was quite young, as the bones of young individuals dissolve and erode easier than those of adults. None of this evidence, however, is definitive, and the sex and age of the individual remain speculative.

Burial 8

This burial was the best preserved of the 2004 season. The body was laid in a flexed position, on the left side, head to the east, north of a large stone structure.

Bones present: the cranium was smashed and disarticulated under the pressure of the soil. The *neurocranium* was present in several rather large pieces, including the almost entirely preserved frontal lobe. The face was preserved only partially, mandible broken in the middle.

⁵ These bones extremely desiccated and poorly preserved and were discarded.

Post-cranial skeleton: This individual was almost entirely preserved. Under the skull were an almost completely preserved few upper cervical vertebrae, including the *atlas* and *axis*. The thoracic part of the back bone was rather poorly preserved, but there were some traces of the vertebrae, especially in the upper part. The lumbar vertebrae were clearly visible, as well as the sacrum. Both of the clavicles were present, with the right one almost intact, also preserved was the right scapula, and a number of rib fragments, including a nicely preserved right first rib. Also preserved were – the right humerus (lacking parts of the shaft and distal fragments), the proximal part of the right ulna and the middle part of the right radius shaft. The left arm was absent, except for a few fragments of the humerus shaft and carpals; the metacarpals and phalanges of the left hand deposited under the cranium. The pelvic bone was amazingly well preserved, and was found almost in its correct anatomical position. Only the proximal part of the left femur was preserved, with the head still in the acetabulum. The shaft of the right femur was preserved, as well as the distal end. The lower parts of the legs were less well preserved – no traces of the left tibia and fibula remained except a few chips of the shafts, and the right tibia was preserved only in the distal part. The right foot, however, was almost entirely preserved, with tarsal, metatarsals and phalanges in their anatomical position. The left foot was less well preserved, as only parts of the bones were present.

Examination: The state of preservation allowed for the examination of a lot of characteristics and distinctive areas of the skeleton. Details of the pelvis morphology, as well as of the cranium, show that it was most likely a male individual in his late thirties.

Summary

Three of the four burials uncovered at the site in the 2003 season were primary, single interments. All of them were laid on the right side of the body in a flexed position. One (Burial 1) was a secondary deposit. Of the burials excavated in 2004, excluding the remains of Burial 4, which had been primarily excavated in the 2003 season, one was a secondary deposition, and three were intact, primary, single interments. Two of the 2004 season's burials were in an extremely poor state of preservation (Burial 6 and 7). All the primary burials were in a flexed position, but with different arrangements of the body.

Burial 1 – secondary deposition, male, *adultus* or early *maturus* (over 35)

Burial 2 – female (?), *juvenis* (16–20)

Burial 3 – male, *adultus/maturus* (over 40), some pathological changes on tibia

Burial 4 – male, *adultus* (30+), cavities on canine and premolar teeth.

Burial 5 – secondary deposition, male, *adultus* (35–40)

Burial 6 – female, adult

Burial 7 – male (?), age uncertain

Burial 8 – male, *adultus* (late 30's)

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