

Chapter 12: SHANIDAR

Shanidar Cave is positioned in the Zagros Mountains of Iraq close to the borders of both Turkey and Iran. Shanidar Valley is delineated by “the Baradost Mountain [Chia Nivakhin or Chia Baradost] on the northeast and Berat Dagh or Mountain on the southwest” (Solecki 1971:62). The valley was carved by the Greater Zab River. The cave is elevated at 730, 745, or 765 meters above sea level (Defleur 1993:151; Oakley, Campbell, and Molleson 1975:122; Trinkaus 1983:5). Facing south, the cave overlooks the Greater Zab River and is situated approximately 13.5 kilometers from the confluence of the Greater Zab and Rowanduz Rivers (Solecki 1971:85; Trinkaus 1983:5).

Shanidar Cave measures 50 meters wide by 26 meters long (Trinkaus 1983:6). The deposits were at least 14 meters deep. The cave was periodically inhabited by Shirwani Kurds, a branch of the Barzani Kurds, during all the field seasons at Shanidar Cave. In the winter of the first field season, Solecki took a census of the numbers of people and animals occupying the cave. The Kurdish people, numbering at least 40, brought their dogs [at least 7], horses [10], cattle [“41 cows and calves”], goats [100 to 150], and at least a dozen chickens (Solecki 1971:110). When Solecki returned for the fourth field season, he discovered the cave’s occupants had removed the fence around the excavation trench and used the trench as a garbage pit, particularly for “smelly dung and barnyard refuse” (Solecki 1971:216)

The cave's Middle Palaeolithic deposits came from one layer, Layer D. Trinkaus (1983:9) stated: "hearths, animal remains, and stone tools" were "distributed continuously throughout Layer D"; however, "two concentrations of occupational debris" were noted. The Shanidar I, III, and V hominids were discovered in the upper concentration while the remaining six hominids were discovered "slightly above" the lower concentration (Trinkaus 1983:9).

The tool industry associated with the Middle Palaeolithic layers was described as Zagros Mousterian. This industry resembled the Typical Mousterian from France (Solecki 1971:263). The Middle Palaeolithic cave dwellers employed some Levallois techniques as recognized in the presence of 4 or 5 tortoise or Levallois cores "made on small pebbles" (Solecki 1971:264). The lithic materials available to the Shanidar people were generally river cobbles (Solecki 1971;267). Apparently, no handaxes or large chopping tools were found in the Shanidar sample.

The faunal remains from the Middle Palaeolithic layers of the cave were mainly "goat, sheep, wild cattle, pig, and land tortoise" (Solecki 1971:257).

Dates for Shanidar Cave were based on Carbon-14 dating. The upper levels dated to $46,900 \pm 1500$ years BP (Oakley, Campbell, and Molleson 1975:122). The date for the lower occupation level was estimated around 60,000 years BP. The dates for this site may be older as Carbon-14 dating has limitations. The date generated for the cave was close to this limitation.

Before embarking on an excavation of the cave, a test trench which "measured 10 feet long by 2 feet 6 inches wide" was started at the central region and

“forepart of the cave” (Solecki 1971:91-92). This trench was enlarged to 28 feet in length and later to 43 feet.

During the first field season, a grid system was established in the cave using squares of 5 feet by 5 feet. Two additional test squares measuring a total of 15 feet by 20 feet were dug at the northern end of the original trench. The excavators were forced to use dynamite to remove some of the large boulders which had periodically collapsed from the roof and possibly walls of the cave.

The Shanidar Baby was discovered in the second field season in the cave. The third field season brought forth the remains of Shanidar I, II, and III. Shanidar III had actually been discovered before the other two, but the skeletal remains were not immediately recognized as hominid. The balance of the remains were recovered in the fourth and final season in the cave: Shanidar IV, V, VI, VIII, and IX. When Shanidar IV was removed in a block, the remains of three other individuals were incorporated in it. Before the researchers recognized the additional remains, another skeleton had been discovered and named Shanidar V (Trinkaus 1983:15-16). Only one other hominid was immediately recognized from the Shanidar IV complex and this individual was named Shanidar VI. The existence of Shanidar VIII and IX was suspected but not absolutely verified until the remains were examined in the lab by Stewart. These individuals were originally identified as Shanidar VII and VIII. The baby discovered in the first field season had not received its numerical identification. The *Catalogue of Fossil Hominids* (Oakley, Campbell, and Molleson 1975:122) numbered the hominids differently. This method has been retained. The Shanidar IV complex became Shanidar IV, VI, VIII, and

IX. The first discovery, the Shanidar baby, was named Shanidar VII. As indicated in Chapter 8, one more hominid may have been discovered. These anomalous remains are still in the deposits of the cave. All of the Shanidar fossils were morphologically identified as *Homo sapiens neandertalensis* (Trinkaus 1983:436).

PATTERNS AND IMPLICATIONS

Since the excavation area was limited to the central portion of the cave and because of Solecki's preemptory determination of death by rockfall for the Shanidar I, II, III, and V hominids, interpretations of the patterns were somewhat restricted.

LOCATION IN SITE

Any statements about locational patterns in the cave are premature. Most of the regions around the wall of the cave have not been excavated. Certainly, a number of hominids, nine to date, were found in the central, excavated portion of the cave. [See Appendix 2: Site Maps, pages 522 - 524]. Whether this area represented a preferential disposal zone is uncertain. The Kurdish occupants of the cave had built shelters around the wall of the cave. Solecki (1971:244) pointed out the best occupational evidence in other caves was around the cave walls, a tradition which was likely maintained over vast periods of time. To test this theory, he began to extend his test trench toward the north wall during the last days of his fourth field season. In the process, Solecki encountered a proto-Neolithic cemetery containing 28 individuals. In other sites in the Near East, burials from upper layers often intruded upon the disposals in the lower layers. Perhaps

this central and northern region of the cave was the favored location for the dead through a considerable span in time.

BURIALS

At least seven of the nine hominid depositions fit criteria for primary or secondary burials, in spite of Solecki's interpretation of roof collapse as the cause of accidental inhumation for Shanidar I, II, III, and V. All the hominid depositions are examined in this section. The acknowledged or generally accepted burials are discussed first. [See Appendix 3: Burial Patterns, pages 539 - 541 and Appendix 4: Burial Diagrams, pages 560 - 562].

The Shanidar baby, Shanidar VII, was inhumed 8 centimeters above a hearth. The inhumation was also 3.5 centimeters below another ash lens. The age of the infant was around 8 to 9 months at death. The infant's remains were found in anatomical order and articulated. A total of 11 element categories and 10 skeletal categories were recovered. No pit was recognized in the sediments. The infant was probably buried on its right side with the body strongly flexed. The head was looking up and the legs appeared flexed at a right angle to the body with the heels against the pelvis. The legs leaned to the right. However, Solecki (1971:137; and cited in Defleur 1993:68) mentioned the knees of the infant may have originally been "up". If this was the case and because the head was looking up, the body may have actually been disposed on the back or right side of the back. Most of the osseous elements were crushed and fragmented. The arm bones, with the exception of the right ulna and right hand, were not preserved. *In situ*, the outline of the arms indicated they were strongly flexed and leaning right. The

weight of overlying sediments during the decomposition of soft tissues may have caused the arm and leg bones to slump to the right. The axis of the body was north-south with the head to the north. The right hand was closed and the palm was up. “A small block of natural limestone lay at the left heel” and next to this lay “a small nodule of black carboniferous substance measuring 0.5 inch by 0.75 inch” (Solecki 1971:137-138). A mammal bone fragment was located 1 inch away from [east of] the left knee and a flint was found 2 inches from the infant’s head. These materials represented the same materials from the occupation layers. For this study, these items were inclusions or associated features and artifacts.

The Shanidar IV complex was encountered August 3, 1960. The burial first appeared as the inhumation of a single individual, a male around 30 to 45 years of age. Shanidar IV’s skeleton “was hemmed in on three sides by stones” (Solecki 1971:232). Solecki (1975:880) called this a “niche of stones”. Rather than a pit, the Shanidar IV complex [Shanidar IV, VI, VIII, and IX] was placed within the confines of a natural feature similar to the disposals of Qafzeh 8 and Amud 7. The bones of Shanidar IV were lime encrusted and poorly preserved. Shanidar IV’s body was placed on the left side and orientated along a southeast to northwest axis according to the burial plan (Solecki 1971:245). The head was south or southeast, on the left side, and faced west. The left arm was flexed and brought back to his face while the right arm was also flexed and the right hand rested at the left elbow. The legs were flexed at an approximate right angle to the body with the heels at the pelvis. “Some flints and a large number of mammal bones were taken out of the screening” in the area occupied by Shanidar IV

(Solecki 1971:229). From the fill matrix surrounding Shanidar IV [VI, VIII, and IX], Madame Arlette Leroi-Gorhan found pollen samples “from at least eight species of flowers” including “grape hyacinth, bachelor’s button, hollyhock, and a yellow-flowering groundsel” (Solecki 1971:246). Yarrow pollens were abundant. This plant is commonly used in herbal medicines (Solecki 1971:248). Other areas of the site analyzed for pollens retained minimal levels. The analysis indicated flowers had entered the deposits with the corpses probably as a burial offering. The Shanidar people received the epithet of “the First Flower People” from Solecki (1971). The pollens may also have been carried into the deposits by jirds or other burrowing rodents (Sommer, Jeffrey D. 1999:129)

As T. Dale Stewart worked to expose the remains of Shanidar IV, he encountered an extra, badly crushed humerus near the head of the skeleton. Shanidar IV’s humeri were already accounted for and in anatomically articulated positions. This humerus marked the presence of Shanidar VI. Shanidar IV and VI were removed in a block. Loose bones were discovered upon the removal and were collected. Some of these bones appeared to be associated with another adult and others appeared to be the remains of another infant. These extra remains proved to be Shanidar VIII and IX. Shanidar IV’s and VI’s bones were “mixed *in situ*” and, based on arm positions, Shanidar VI was probably buried on the left side in a position similar to Shanidar IV (Trinkaus 1983:28). Some confusion was encountered on the state of articulation of Shanidar VI: Solecki (1971:238) indicated the skeletal remains of Shanidar VI were not articulated or in anatomical association while Stewart (1977:161) stated the “left fibula, a small piece of the right fibula, and the 4th and 5th metatarsals” were “in approximately

correct anatomical relationship, the feet being near the center of the box and the legs to the south”.³⁸ Shanidar VI, a female of 20 to 35 years, was probably placed in a semi-flexed or right angle flexed position on her left side. She was placed “slightly to the southwest and below Shanidar IV” (Trinkaus 1983:28). The positions of a humerus [near the head of Shanidar IV], the legs and the feet suggest the body was orientated southeast-northwest. She probably entered the natural disposal zone before Shanidar IV. The bones of Shanidar VIII, a young adult female, were disarticulated and in no anatomical order. The infant of 6 to 12 months, Shanidar IX, was represented by nine vertebrae. Solecki (1971:238) believed all four individuals were interred together. The order of deposition was: [1] the infant, [2] the two females, and [3] the male. “In any case, the male received the main attention of the burial, and the Shanidar VI” and VIII “females were given subordinate burial next to him” (Solecki 1971:238). The disarticulated state of the remains of Shanidar VIII makes this supposition unlikely, unless she was re-interred. More likely, Shanidar VIII’s disposal was disrupted by the inhumation of Shanidar IV and possibly VI. Shanidar VI may also have been disturbed by the interment of the male. The infant’s position was not specified. Any commentary on this specimen would be unjustified.

Shanidar I’s skull was located before the post-cranial skeleton. Solecki (1971:178) noticed a “thin, dark streak on the west side” of the skull. A large stone rested on the skull and large, heavy rocks were above and around the body. Picks were used to gain access to the cranial remains which lay in a lens of dark, brown sandy loam

³⁸ The box held the block removal of Shanidar IV.

containing some fragments of charcoal (Solecki 1971:182). “The whiteness of the limestone blocks and the fragments of rocks contrasted sharply with the fresh brown colored soils in the section, criss-crossed by pick marks” (Solecki 1971:181). The cranium was discovered at the top of layer D. The mandible lay on a large, flat slab of limestone and, along with cervical vertebrae, was displaced to the “left and front of the cranium” (Trinkaus 1983:17). The post-cranial bones extended to the east of the cranium and these elements were covered by small, portable limestone rocks. Shanidar I, or Nandy as the fossil was nicknamed, represented a 30 to 45 year old male. He lay in a fully extended position on the right side of his back; his right arm crossed over his chest and his left arm, or what remained of it, lay along the side of his body. The body was aligned along a west to east axis. Two concentrations of mammal bones were discovered near the skeleton (Solecki 1971:195) and two hearths were found close to the body. Defleur (1993:159) mentioned one of these hearths was directly above the stones covering the corpse. Flints were recovered in this hearth. The excavators retrieved 25 of Shanidar 1’s skeletal elements designating 18 skeletal categories.

Nandy had received a blow to the left side of his cranium which had affected the right side of his body. As a result, he had probably been crippled and he may have experienced an amputation of the right forearm and hand. His injuries had healed to some extent and were not directly related to his death. Furthermore, Trinkaus (1983:145-147; 1982:199) indicated the possibility of artificial cranial deformation. The cranium demonstrated evidence of pre-bregmatic flattening, but not lambdoidal elevation or occipital flattening. Cranial deformation, particularly occipital flattening, was still

practiced by some of the Kurds in this region at the time of the excavation (Solecki 1971:113).

The presence of a band or lens of dark soil around the cranium and skeleton as well as the presence of portable stones over the body strongly suggests Shanidar 1 was the object of an inhumation. The evidence points to an interment in a shallow grave with a rock cairn placed over the body for protection of the corpse. The Herkis Kurds in the 1950's and 1960's buried their dead in shallow graves. They mounded soil over the disposal and covered the whole interment with stones. Decapitation during a roof collapse, as discussed by Solecki (1971:195), cannot be proven or rejected. Shanidar cave is located in an earthquake zone and the excavation crew experienced an earthquake during the first field season (Solecki 1971:161, 213). The cranium may have been dislodged from its original position during an earthquake.

The position of Shanidar II may comply with Solecki's explanation of roof collapse. The body may have been orientated along a north-south axis. The head pointed south, the mandible north; but the vertebral column was twisted around the head. This abnormal position suggested the head was forcefully pushed back on the spine. The flattened cranium rested on the right side. This young male individual [20 to 30 years at death] was represented by 8 skeletal elements and 7 skeletal categories. The possible north to south orientation of this young male complied with other young adults from the Near East [Amud I and Qafzeh 9]. This assessment requires further investigation. Slightly above the skeletal remains and on top of the pile of small stones covering the skeleton, Solecki discovered a hearth which contained the mandible of a mammal and

several Mousterian points (Solecki 1971:225). This evidence may indicate post-mortem mortuary treatment, particularly protection of the corpse and possibly a funeral feast. Alternatively, considerable time could have elapsed between the deposition of the hominid and the creation of the hearth. However, the consistency with which hearths were discovered in association with all of the disposals except the Shanidar IV complex promotes them as potential evidence for deliberate mortuary ritual.

Shanidar III, discovered prior to I and II, was also a male aged between 40 and 50 years. The body was found in a “crevice among the stones” (Solecki 1971:211). The skeletal remains registered the presence of 23 skeletal elements categories and 15 skeletal categories. The cranium was absent; but two maxillary and two mandibular teeth were recovered. The upper limbs were “facing obliquely to the east” and the lower limbs “to the west” (Solecki 1971:211; Defleur 1993:160). The vertebrae and ribs were the only elements in anatomical position and indicated the body rested on the right side (Trinkaus 1983:21). If these east and west positions of the appendages marked the relationship of the limbs to each other and since the body rested on the right side, the orientation was probably east to west. The legs were flexed against the trunk of the body (Defleur 1993:160). If the degree of flex of the legs resembled Shanidar IV and Shanidar VII, the legs may have been positioned in a right angle or strong flex. The corpse was recovered from loamy sediments and stones lay over the body. Two hearths were present “just to the east” of the skeletal remains. The loam, the cairn of rocks over the body, and the presence of hearths closely associated with the skeletal remains may substantiate a deliberate interment.

This Neandertal male suffered a penetrating wound damaging the 9th left rib and an injury to the right ankle accompanied by degenerative modifications (Defleur 1993:161). “The remains of Shanidar 3 were displaced by a rockfall.....whether the rockfall was responsible for his death is a matter of conjecture” (Trinkaus 1983:414). He probably succumbed to the effects of a pneumo-thorax caused by his wound. Skeletal evidence implied he died several weeks after the rib injury.

The final individual, Shanidar V, was a male of between 35 and 50 years of age at death. The position of the body and the crushed state of the skeletal remains accorded with Solecki’s rockfall hypothesis as the cause of death (Trinkaus 1983:27). Shanidar V’s head was bent backward and lay at his pelvis. He was found on his knees, indicative of a crouched position. The bones were fairly spread out and were possibly disturbed at some point by a later rockfall, animals, contemporary or later inhabitants of the cave (Solecki 1971:241-242). Some of the bones were intermixed with the stones which overlay the skeleton. On top of the stones, Solecki encountered a hearth as well as the lower jaw of a large mammal. Once again, some evidence of deliberate mortuary treatment was encountered.

The cranium of Shanidar V also exhibited evidence for artificial cranial deformation (Trinkaus 1983:145-147; 1982:199). Lambda was elevated which recommended occipital flattening. The occipital bone was unfortunately missing. The evidence for cranial deformations for both Shanidar I and V was consistent with the type of deformation “associated with fronto-occipital head binding in recent humans” (Trinkaus 1983:146). Shanidar I does not present evidence for occipital flattening;

however, Trinkaus (1983:147) indicates that “artificial cranial deformation among recent humans is highly variable both within and between populations, and there is frequently a continuum in any one population that practices cranial deformation from non-deformed to highly deformed crania”. Although cranial deformation could not be ascertained for Shanidar II and IV, Trinkaus (1983:147) did note that “the relatively high parietal region of Shanidar” II and the “apparent flatness of the Shanidar” IV “frontal bone” potentiated a “similar cranial deformation”.

In all likelihood, Shanidar II and Shanidar V were killed and partially buried by a rock fall in the cave. However, traumatic post-mortem treatment of the corpse prior to or during deposition cannot be excluded. Regardless of the means or agency of deposition, the potential for post-deposition mortuary ritual cannot be ignored, particularly as hearths, fragments of mammal bones, and flints were discovered in association with most of the hominid disposals. The present state of the data does not permit either the full acceptance or complete rejection of the possibility of post-mortem mortuary ritual.

BURIAL POSITIONS AND ORIENTATIONS

The Shanidar articulated population were discovered in three body positions: left side, right side, and on the back. Both occupational levels are included in the chart. Shanidar V was on his knees; but, Shanidar II and V were excluded from the chart due to their possible demise and partial interment by rockfall. Shanidar VIII and IX were excluded as they were disarticulated remains and no positions were known.

The adults in the lower occupation of level D, Shanidar IV [male] and VI [female] were probably buried on the same side, the left side. This evidence tends to indicate a lack of sexual distinction at least in the position of the bodies. The infant from the same occupation layer was probably buried on the right side. However, as previously stated, this infant may have been buried on its back or the right side of its back if the knees were originally pointed upwards and since the face was turned up. Regardless, the different burial positions may mark the age differences of the adults and infants..

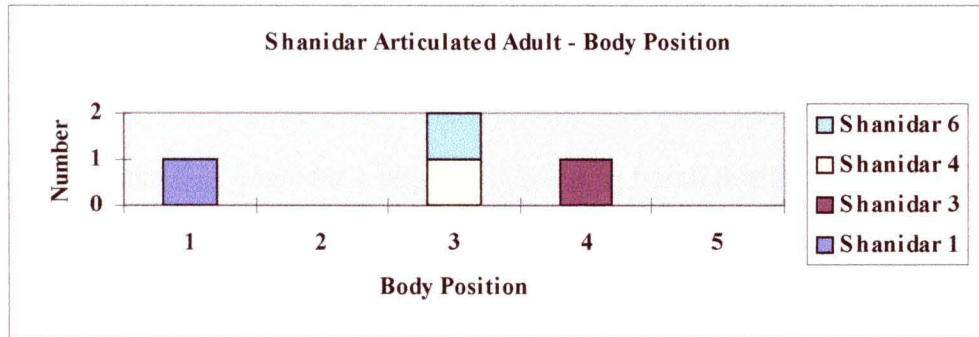


FIGURE 12.1

Legend: 1 - On Back 2 - On Knees 3 - Left Side 4 - Right Side 5 - Unknown
TOTAL NUMBER OF INDIVIDUALS = 4

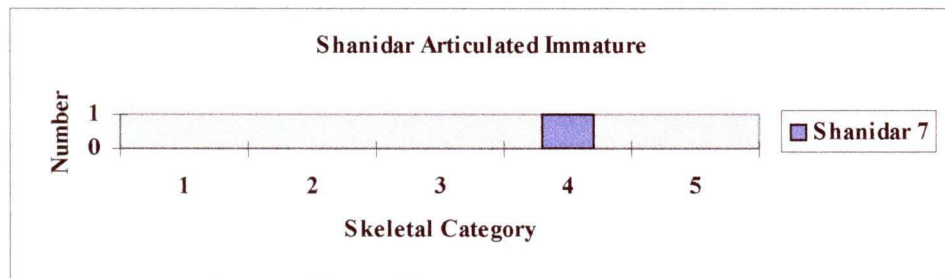


FIGURE 12.2: Immature Body Position

Legend: 1 - On Back 2 - On Knees 3 - Left Side 4 - Right Side 5 - Unknown
TOTAL NUMBER OF INDIVIDUALS = 1

The adults from the upper occupation layer of level D were recovered in two different body positions. The adult male, Shanidar I [30 - 45 years at death] was placed on his back or right side of his back in an extended posture while the older male, Shanidar III, was situated on his right side in a flexed posture. Placement on the right side of the back may mark a similarity of side for both males; but, not identical body situations. These two body positions may indicate a difference in the social identity of younger and older males. Shanidar III was approximately 1 meter lower in the deposits than Shanidar I and more than 1.5 meters higher than Shanidar IV, also a male of between 30 and 45 years of age, from the lower occupation layer. The left side interment of Shanidar IV, the right side inhumation of Shanidar III, and the 'on back' or 'right side of back' arrangement of Shanidar I may mark different burial positions for males in different time frames or may indicate different cultural traditions for the disposition of deceased males. Alternatively, intricate age distinctions, such as those allied to socially perceived life stages may be registered in the disposal positions.

The suggestion of different body positions representing different social identities, social *personae*, or age distinctions is further supported by the right-sided burials. The older adult male and probably the infant were deposited on their right sides. This attitude may have social implications. The very young as well as those of advancing age and the infirm are more dependent on the social group and require more care and attention. This dependency may be reflected by the body position. If this was the case for Shanidar, the deposition of Shanidar I on the right side of his back as opposed to a position on the left side like the other male of similar age [Shanidar IV] may suggest a

method of symbolizing his long term disabilities and reliance on the social group for survival.

On first examination, none of the known orientations corresponded with any particular criteria as the chart below indicates.

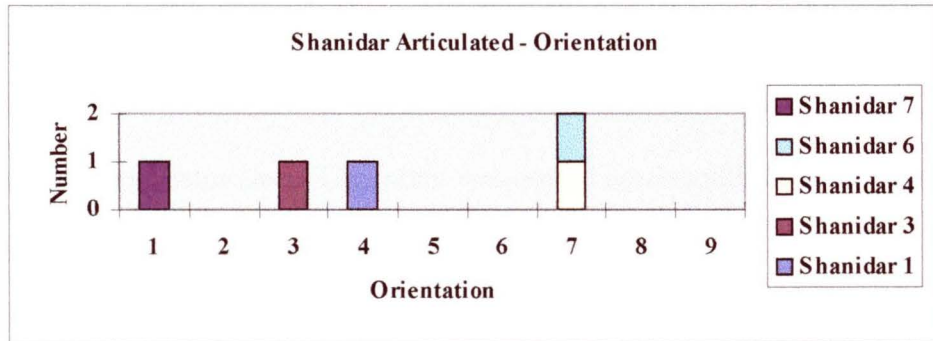


FIGURE 12.3

Legend: 1 - North-South 5 - Northeast-Southwest 9 - Unknown
 2 - South-North 6 - Northwest-Southeast
 3 - East-West 7 - Southeast-Northwest
 4 - West-East 8 - Southwest-Northeast

TOTAL NUMBER OF INDIVIDUALS = 5

The known males [Shanidar I, III, IV] were aligned on different axes. Shanidar III was opposite Shanidar I. This may indicate different social *personae* due to the age of the individuals: Shanidar III was elderly and Shanidar I was an adult to middle-aged adult with physical disabilities. However, Shanidar IV was the same age as Shanidar I and was placed on a different axis of alignment. The orientation of Shanidar IV [southeast to northwest] approached the alignment of Shanidar III [east to west] in that the heads of both individuals lay toward the east. Alternatively, the orientations at Shanidar could indicate time of day or season of interment as discussed in previous chapters. If this was the cultural practice of the Shanidar population, the same axes of

alignment, southeast to northwest, for the Shanidar IV male and the Shanidar VI female may support their joint interments. The more southerly direction of Shanidar IV's head in relation to Shanidar III was probably allied to his younger age. In general, the variability of head directions may register different status distinctions or social *personae* for the males based on age and socially conceived issues of dominance/subordinance. The female, Shanidar VI was probably buried on the same axis of orientation as Shanidar IV, southeast to northwest. Again, the similarity of orientations for Shanidar IV and VI indicate no sexual distinction. The infant was buried north-south which definitely distinguished it from any of the adults.

The next chart exhibits the comparison between orientation and body position.

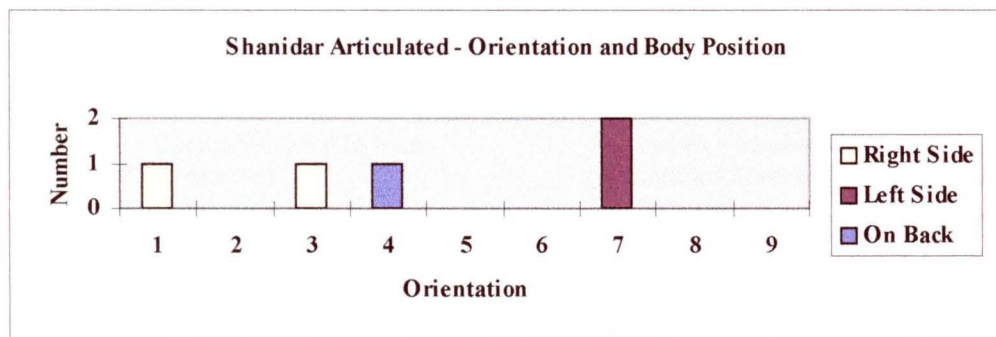


FIGURE 12.4

Legend: 1 - North-South 5 - Northeast-Southwest 9 - Unknown
 2 - South-North 6 - Northwest-Southeast
 3 - East-West 7 - Southeast-Northwest
 4 - West-East 8 - Southwest-Northeast

TOTAL NUMBER OF INDIVIDUALS = 5

The only demonstrable correlation between the orientation and body position arrangements was the alliance between the southeast to northwest axis of

alignment and the left-sided burials. The number of individuals for which both positions were known was very small. Other correspondences may have existed for this site either within time frames or between time frames.

Arm positions are listed in the next four charts. The only regularity discerned from the arms positions was the tendency for arm positions to be flexed to some degree in the lower occupation [Shanidar IV and VII]. The number of individuals for which arm positions were known numbered three; therefore, this pattern remains speculative.

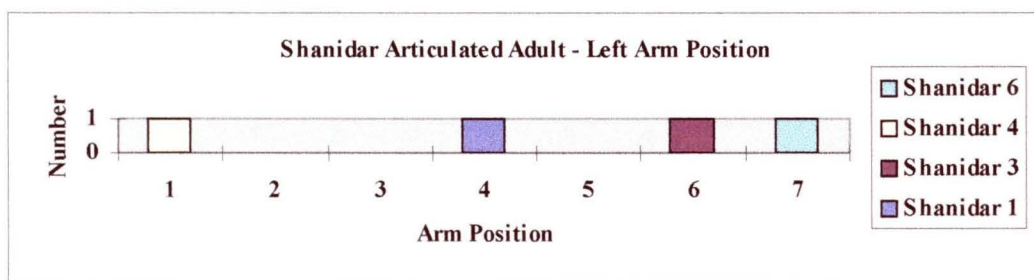


FIGURE 12.5

Legend: 1 - Contracted; hand to head 5 - Crossed over abdomen
 2 - Contracted 6 - Extended down body
 3 - Right angle flex, +/- 7 - Unknown
 4 - Crossed over chest

TOTAL NUMBER OF INDIVIDUALS = 4

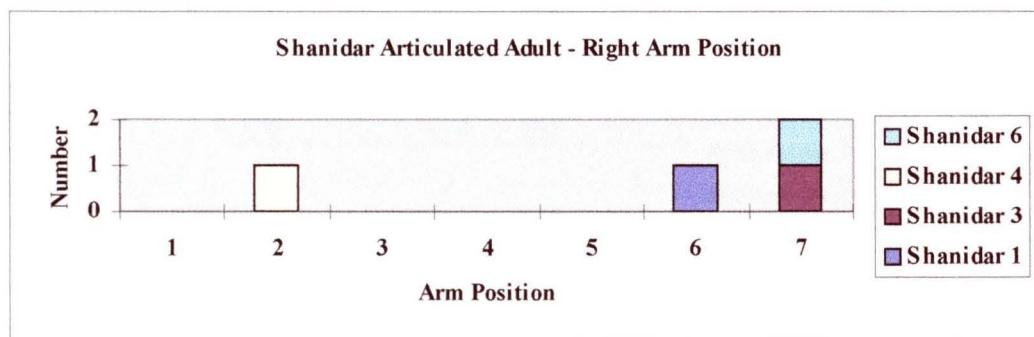


FIGURE 12.6

Legend: Same as previous chart

TOTAL NUMBER OF INDIVIDUALS = 4

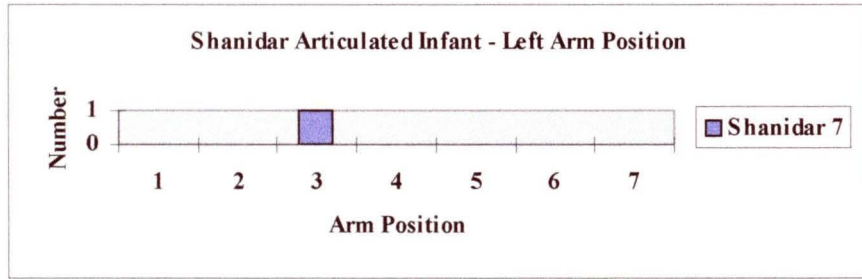


FIGURE 12.7

Legend: 1 - Contracted, hand to head
 2 - Contracted
 3 - Right angle flex, +/-
 4 - Crossed over chest
 5 - Crossed over abdomen
 6 - Extended down body
 7 - Unknown

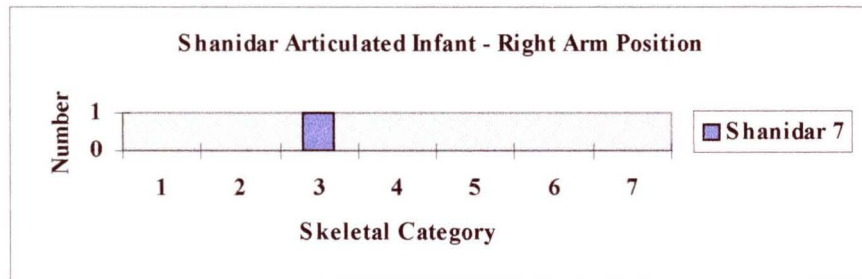


FIGURE 12.8

Legend: Same as above

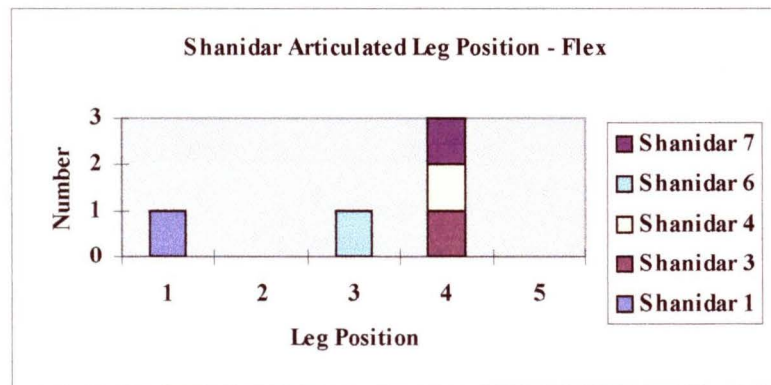


FIGURE 12.9

Legend: 1 - Extended
 2 - Almost extended
 3 - Semi-flexed
 4 - Right angle flex; -
 5 - Unknown

TOTAL NUMBER OF INDIVIDUALS = 5

The side of the body to which the legs leaned was directly tied to the position of the burial: right side of the body to right-sided placements, left side of the body to left-sided placements, and no side to the extended position. The same explanations also applied. The elderly or older male and the infant were placed on the right side and their positions may be allied to their dependency on the social group. The male and female from the lower occupation were placed on their left sides and their duplicate positions implied no sexual distinctions in body position. The adult male with infirmities, Shanidar I, was placed in an attitude distinctly different from the other four. He was on his back with his legs extended. Shanidar I's disabilities may be designated by his burial attitude; his social *persona* may be different from the other males; or, as the highest individual in the deposits, his position may be commensurate with different burial traditions among the Middle Palaeolithic occupants.

INCLUSIONS/ASSOCIATED ARTIFACTS/FEATURES

Most of the disposals had inclusions, associated artifacts, or features which were indicative of some form of mortuary ritual. This was also the case for the two individuals who were likely killed by a roof collapse [Shanidar II and V].

Mammal bone fragments and lithics were retrieved from the disposal units of four of the individuals and from the Shanidar IV Complex. The only disposal which did not incorporate mammal bone and lithics was Shanidar III. None of the mammal bones were identified by species. Mammal mandibles were found in association with two individuals: Shanidar II and V. These were the two who were likely killed by

rockfall. The relevance of this feature is difficult to determine. A large boar mandible was discovered with the Skhul V disposal.

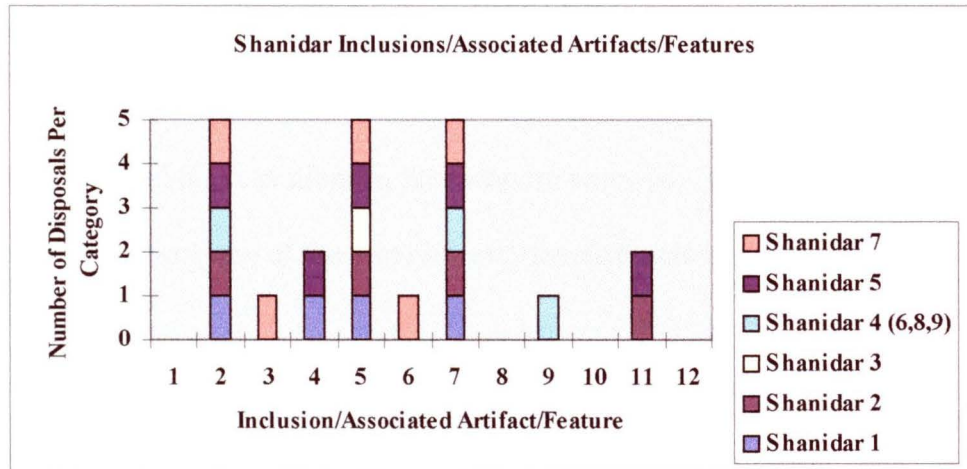


FIGURE 12.11

Legend: 1 - Antler
 2 - Bone
 3 - Carboniferous substance?
 4 - Charcoal
 5 - Hearths
 6 - Limestone Blocks
 7 - Lithics
 8 - Ocher
 9 - Plant Pollens
 10 - Shell
 11 - Stones
 10 - Teeth

TOTAL NUMBER OF INDIVIDUALS = 9

Hearths were discovered in association with all the disposals except the Shanidar IV Complex. The regularity with which hearths were recovered in close proximity to the hominid remains provides support for deliberate post-mortem mortuary activity. Information on the distribution of hearths in other regions of the excavation might assist in the determination of the fortuitous or deliberate nature of the association of hearths with the hominid disposals.

The hypothesis of a deliberate offering of flowers suggested by the incorporation of pollens with the Shanidar IV Complex of hominid disposals tended to be

supported by the absence or lower density of pollens recovered from other regions of the excavation zone. However, burrowing rodents may have been responsible for introducing the pollens into the deposits. Solecki (1971:238) noted the presence of rodent burrows in close proximity to the hominid disposals, particularly Shanidar IV and VI. The deliberate or fortuitous nature of the incorporation of pollens must be re-evaluated when and if excavations in Shanidar are renewed. This type of inclusion has not been reported with any of the other Mousterian disposals in the Near East to date.

SKELETAL PATTERNS

Most of the osseous material from Shanidar had not mineralized. The crushed and powdery condition of many of the bones reflected the types of taphonomic disturbances to which the remains were likely subjected. For example, the osseous elements were so fragile that when Stewart attempted to remove bone, the material crumbled into several pieces. In fact, Stewart “found that simply touching the surface of the bones with a pen would open up fracture lines” (Solecki 1971:232).

The skeletal distribution of the disarticulated remains is listed in the following chart. Shanidar VIII and Shanidar IX were recovered as part of the Shanidar IV Complex. Their presence in the disposal was suspected when skeletal elements fell from the block during the removal and crating of Shanidar IV (Solecki 1971:236). The incorporation of these two individuals was verified in the lab. “It is hard to describe Shanidar 8 as a partial skeleton because it is primarily a collection of extras from Shanidar 4 and 6” (Trinkaus 1983:29). The bones of Shanidar VIII were generally not

complete elements; however, the bones allocated to this individual showed some similarities in terms of morphology and size. Therefore, Shanidar VIII is considered a single individual.

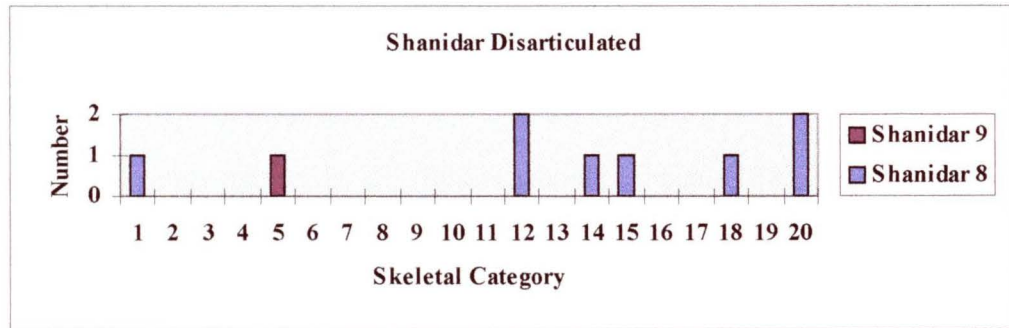


FIGURE 12.12 - Skeletal Distribution

Legend:	1 - Cranium	7 - Clavicle	13 - Ulna	19 - Patella
	2 - Mandible	8 - Sternum	14 - Radius	20 - Foot Bones
	3 - Teeth	9 - Sacrum	15 - Hand Bones	
	4 - Hyoid	10 - Innominate	16 - Femur	
	5 - Vertebrae	11 - Scapula	17 - Tibia	
	6 - Ribs	12 - Humerus	18 - Fibula	

TOTAL NUMBER OF INDIVIDUALS - 2

Shanidar IX was marked by nine vertebrae. These were discovered in two sections, each articulated. The first section included cervical vertebrae and one thoracic vertebra [C5 - C7; T1] while the second held thoracic vertebrae [T2-T6]. Conceivably, Shanidar IX could be included with either the articulated remains or those remains with some association such as Shanidar II, V, VI. This individual was an infant of 6 to 12 months at death. Vertebrae of immature individuals are not fused and generally have three primary ossification centers and nine secondary ones (Krogman and Iscan 1986:87). Although the unfused vertebrae in the two sections were articulated, they only represented one skeletal category so Shanidar IX was considered disarticulated.

The chart indicated that Shanidar VIII retained both humeri. The humeri were represented by the left capitulum [the lateral half] and the right trochlea (Trinkaus 1983:224). These are both parts of the articular surface of the elbow. The other long bone elements were from the right side only and included the proximal end of the radius [head, neck and two-thirds of the shaft] (Trinkaus 1983:240) and the right fibula [“proximal and central diaphyseal section”] (Trinkaus 1983:321). The right hand of Shanidar VIII was only marked by the right scaphoid (Trinkaus 1983:258). The feet were designated by portions of the right cuneiform, 3 right and 3 left metatarsals, and 3 right and 1 left proximal phalanges. Shanidar VIII was extremely fragmentary. Due to the circumstances of discovery, the question of whether more elements from this individual as well as Shanidar IX are still in the deposits of Shanidar can be raised. Whether any significance can be attached to the predominance of right sided elements for Shanidar VIII cannot be determined at this time.

The individuals whose remains displayed some evidence for anatomical association, but not complete articulation were Shanidar II, III, V, and VI. The distribution of elements by side for Shanidar II is 3 left-side elements and 1 right side element. Shanidar III retained at least 9 left-side bones and at least 8 right-side bones. The femur was not sided. Shanidar V had 5 elements from each side although the scapula was indeterminate. The allocation of side for bone elements from Shanidar VI were 8 left to 9 right. For the most part, the proportions of left to right sided elements were uninformative.

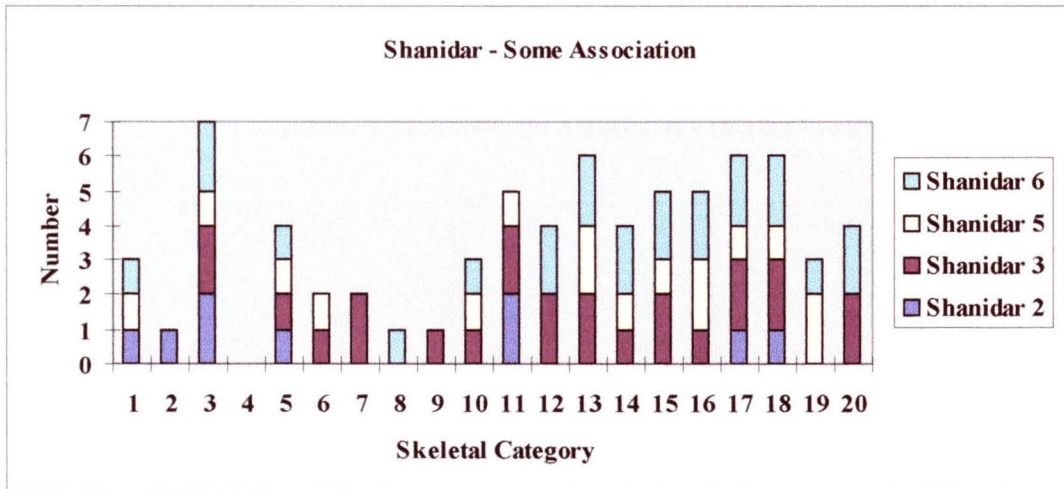


FIGURE 12.13 - Skeletal Distribution

Legend: 1 - Cranium	7 - Clavicle	13 - Ulna	19 - Patella
2 - Mandible	8 - Sternum	14 - Radius	20 - Foot Bones
3 - Teeth	9 - Sacrum	15 - Hand Bones	
4 - Hyoid	10 - Innominate	16 - Femur	
5 - Vertebrae	11 - Scapula	17 - Tibia	
6 - Ribs	12 - Humerus	18 - Fibula	

TOTAL NUMBER OF INDIVIDUALS = 4

The only potential correspondence existed between Shanidar II, a young adult male of 20 to 30 years at death, and the disarticulated young adult female, Shanidar VIII. Both individuals were young adults, most likely younger than the other adults from Shanidar. These two individuals also represented the most fragmentary adult remains. The male disposal held mainly left-sided bones and the female disposal held mainly right. The relevance of this information cannot be determined at this time; although it may indicate some form of curation and a method of marking the sex of the curated corpse.

The allocation of missing elements from the possible inhumations is represented in the following chart. Shanidar VIII and IX were omitted as they were disarticulated. Shanidar II and V were included due to anatomical association.

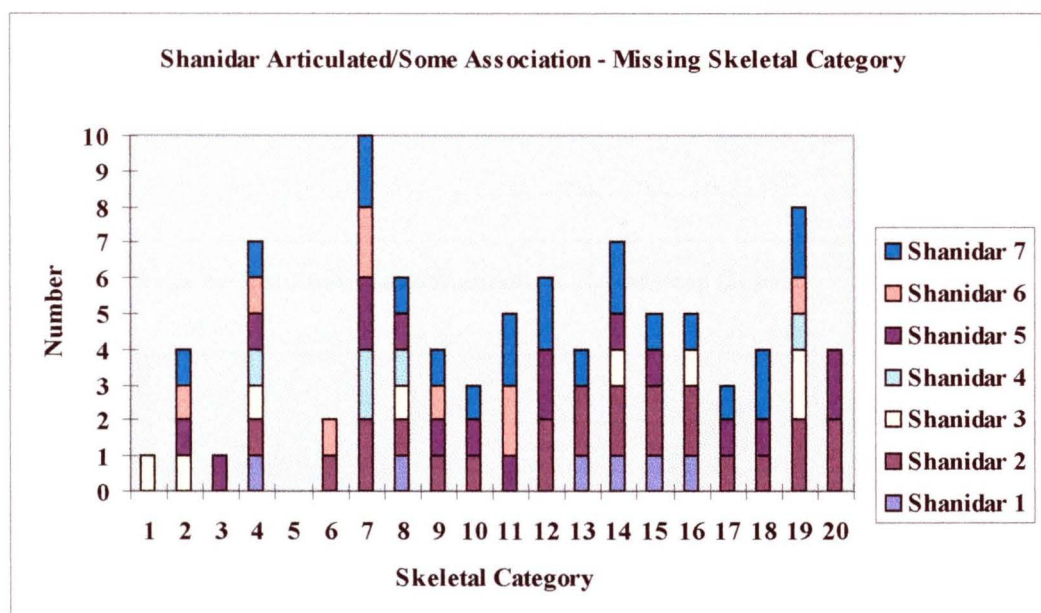


FIGURE 12.14

Legend: 1 - Cranium	7 - Clavicle	13 - Ulna	19 - Patella
2 - Mandible	8 - Sternum	14 - Radius	10 - Foot Bones
3 - Teeth	9 - Sacrum	15 - Hand Bones	
4 - Hyoid	10 - Innominate	16 - Femur	
5 - Vertebrae	11 - Scapula	17 - Tibia	
6 - Ribs	12 - Humerus	18 - Fibula	

TOTAL NUMBER OF INDIVIDUALS = 7

No particular pattern was evident from the graph of the missing element categories. The absence of elements may be more closely related to taphonomic processes than curation.

The sides of the missing elements is shown on the next chart. When the clavicle, humerus, and foot bones were absent from a disposal, they were absent from both sides of the body. Missing patellae exhibited a similar distribution with the exception of Shanidar IV and VI: Shanidar IV was missing the right patella and Shanidar VI was missing the left patella. Five of the seven individuals did not retain either

clavicle [Shanidar II, IV, V, VI, and VII]. The numbers of elements missing from the left side [30] was fairly close to the number missing from the right side [31].

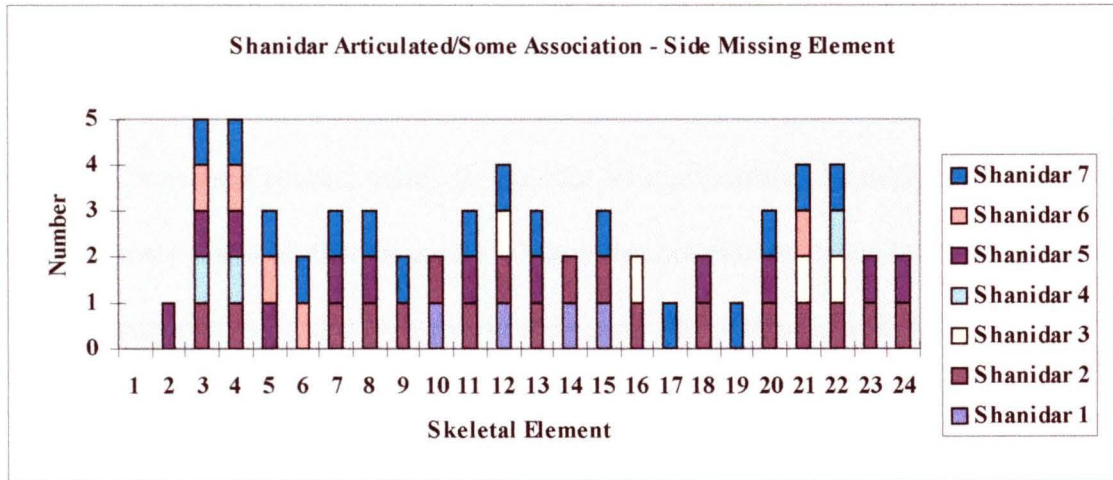


FIGURE 12.15

Legend: 1 - Maxillary Teeth
2 - Mandibular Teeth
3 - Left Clavicle
4 - Right Clavicle
5 - Left Scapula
6 - Right Scapula
7 - Left Humerus
8 - Right Humerus

9 - Left Ulna
10 - Right Ulna
11 - Left Radius
12 - Right Radius
13 - Left Hand Bones
14 - Right Hand Bones
15 - Left Femur
16 - Right Femur

17 - Left Tibia
18 - Right Tibia
19 - Left Fibula
20 - Right Fibula
21 - Left Patella
22 - Right Patella
23 - Left Foot Bones
24 - Right Foot Bones

TOTAL NUMBER OF INDIVIDUALS = 7

Evidence of curation may have been designated by the absence of the Shanidar III cranium and the possible secondary disposal of Shanidar VIII and IX. The fragmentary remains were discovered in the same general region as the potential inhumations. Shanidar VIII and IX were actually recovered from the same burial unit as Shanidar IV, a potential inhumation, and VI, a potential inhumation or secondary disposal. The presence of articulated vertebrae for the infant, Shanidar IX, is difficult to

assess, particularly as the position of these elements within the block removal is not discussed in the literature. Other portions of this infant's remains may still be in the deposits or the representation of articulated vertebrae may indicate some form of curation, display, or possibly use as an object of ornamentation by one of the other members of the Shanidar IV complex. [See discussion of the Adaman Islanders, Chapter 9, pages 243 - 244]. The absence of the Shanidar III cranium is similar to the missing cranium from the Kebara 2 male. If Shanidar VI represents a secondary inhumation and not a primary disposal, then Shanidar VI provides possible evidence for curation. The predominance of left-sided elements in the young adult male disposal [Shanidar II] and right-sided elements in the young adult female disposal [Shanidar VIII] may be an indicator of curation which may also correspond to sex related choices of elements. At this stage and due to the limited area of the excavation in a very large cave, any discussion of curation as a mortuary practice for these fossil hominids is purely speculative.

SUMMARY

The disposals in Shanidar cave recommended deliberate deposition for most individuals and/or deliberate mortuary treatment in the cases of the two individuals whose demise was possibly accidental and related to rockfall. The Shanidar hominids appeared to protect the corpses of their deceased individuals by placing rocks over the skeletal remains.

The high incidence of hearths in close proximity to the disposals favored their use in mortuary ritual, perhaps for burning food offerings to the dead. The hearths were either on top of the cairns or beside the bodies in all of the depositions recovered by Solecki, except perhaps the Shanidar IV Complex. In this case, Solecki did mention the removal of a mass of mammal bones. The First Nation's people of the Cowichan Valley of Vancouver Island still burn specially prepared feasts for their ancestors and for their recently deceased members (personal experience).

In the early occupation levels, the corpses were disposed along a north-south or a south-north [southeast-northwest] axis. The infant [Shanidar VII] and possibly the young male of 20 to 30 years [Shanidar II] were orientated north-south. As previously discussed, these positions fit with the disposal orientations of at least one other infant, an adolescent, and young adults in the Near East [Amud 7, infant; Qafzeh 11, adolescent; Amud I and Qafzeh 9, young adults]. The older male, Shanidar IV, was placed along a southeast to northwest axis. His orientation was almost opposite to the younger male [Shanidar II]. The position of Shanidar II may have been necessitated by his possible death and partial inhumation under a rockfall. Therefore, the emplacement of the younger male in an almost opposite orientation to the older male may be more fortuitous and not applicable to this assessment.

If Shanidar VI was a deliberate primary inhumation, her orientation in the same direction and on the same side, the left side, as the male [Shanidar IV] does not reflect sexual distinctions. If Shanidar VI was a secondary disposal, then both females

were likely relatively disarticulated and this feature may mark a sexual distinction in the disposals of males and females.

The infant, [Shanidar VII] was buried on its right side or perhaps its back and was orientated on a different axis than Shanidar IV. If the Shanidar VII disposal attitude was actually on the back, this position was a common attitude for immature remains at Qafzeh and was the position of the Dederiyeh Infant [a toddler]. If this infant was indeed buried on its right side, then this position is consistent with the disposal of the Amud 7 infant. The orientation of Shanidar VII in conjunction with the burial position [north-south orientation on the right side] may reflect the immature burial pattern for Shanidar as well as the infant burial pattern for the Near East.

The only adequately ascertained distinctions noted between individuals in this lower level of occupation were based on age and marked the contrasts between immature and adult individuals. The uncertain nature of Shanidar VI's disposal, whether she was a primary or a secondary inhumation, or what her exact orientation might be if she was interred restricts further analysis. On the basis of the present information, the social structure in the lower levels was likely equated to age-related social distinctions.

Orientation in the upper levels was different. The male remains were found in a west to east orientation for Shanidar I and probably east to west orientation for Shanidar III. Shanidar III was most likely older than Shanidar I. Shanidar I was disabled. No female or infant remains were recovered in the upper deposits so little more can be stated.

One intriguing feature of the upper disposals was possible artificial cranial deformation for Shanidar I and V. Deformation in prehistory has been linked to denoting “membership in a regional social system” (Wayne Suttles 1990:13). The practice in the Middle Palaeolithic may have marked a distinction between individuals from different social groups or even marked different status distinctions. If the crania of Shanidar II and IV were also deformed, which was possible based on the information presented by Trinkaus (1983:147), then emerging status distinctions or regional social systems may be registered in the site of Shanidar.

For all occupation levels at Shanidar, social *personae* may be denoted by the different disposal attributes such as side of disposal, orientation of the body, and possibly appendicular arrangements. Individual *persona* may include health status and social dependency. This aspect was potentially demonstrated at Qafzeh with the Qafzeh 8 and 11 male hominids and possibly at Kebara with the Kebara 2 disposal.

The absence of most of the skeletal elements from the articulated remains at Shanidar tends to be most parsimoniously explained as the result of taphonomic processes rather than the result of curation. However, the missing cranium of Shanidar III was comparable to the removal of Kebara 2's cranium and may recommend some form of curation. The cranium and mandible of Shanidar III were probably originally present based on the recovery of two maxillary and two mandibular teeth. The exclusion of both sides of the clavicle, humerus, patellae, and foot bones from some articulated disposals may be important. This pattern needs to be readdressed, particularly when and if excavations at Shanidar are renewed. The pre-dominance of different sides of

elements representing young adult males and young adult females also requires further investigation. Again, this information cannot be properly explained until more excavations with more modern techniques can be accomplished in Shanidar Cave.

Chapter 13: SKHUL

Mugharet es-Skhul, the 'cave of kids', is actually divided into three parts, a cave, a rockshelter, and an alcove. Like Tabun, the site is part of the Mount Carmel system and overlooks Wadi el-Mughara. Electron spin resonance dating placed the time range of Skhul around 81.0 ± 15.0 kya BP [early uptake] and 101 ± 12 kya BP [linear uptake] (Bar-Yosef 1992a:195). These dates correspond to Oxygen Isotope Stages 5a to 5d. Tchernov (1992:177) considered the microfauna of Skhul level B, the layer in which all the hominid remains were discovered, to accord with a date range of between 50,000 to around 70,000 years BP. The lithic industry from the site was originally allocated to a Lower Levalloiso-Mousterian (Oakley, Campbell, and Molleson 1975:141). That industry is now regarded as a Tabun C Levantine Mousterian.(Bar-Yosef 1992a:197, 1992b:196).

PATTERNS AND IMPLICATIONS

Skhul has contributed the remains of 26 individuals. Only the fossil hominids of Skhul I through X were provenienced in any fashion. The fragmentary elements of the remaining 16 individuals were not given a precise location.

LOCATION IN SITE

The disposal population of Skhul was spread across the surface of the terrace outside of the overhang of the rock shelter and in the northernmost region of the site. [See Appendix 2: Site Maps, page 526]. Immature individuals were located closer to the rock shelter overhang than adults. Identified adult females were positioned at either edge and toward the front of the depositions, although a male child was the western-most disposal on the terrace. Adult males were generally placed in more central positions on the terrace with the exception of the two males disposed in the alcove area of the site. Skhul V was placed closest to the edge of the terrace and was the most northerly disposal.

Skhul II, III, and IV were deposited in the eastern half of the site and were separated from the larger cluster of hominid disposals in the western half of the site by at least four meters based on the site plan, the distance of 1.5 meter between Skhul V and VI, and the distance of 6 meters between Skhul IV and V. These individuals may have belonged to a different social group occupying the site or the segregation may indicate different kinship affiliations or intricate social distinctions.

BURIALS

Seven individuals were found in anatomical association and/or with the elements in articulation: Skhul I, III, IV, V, VI, VII, and VIII. [See Appendix 3: Burial Patterns, pages 543 - 545, and Appendix 4: Burial Diagrams, pages 564 - 565]. One other specimen, Skhul IX, may originally have been more complete. This specimen

exhibited some degree of anatomical association. Another fossil [Skhul X] may also have been more complete and anatomically articulated: Skhul X was discovered in the lab when the block containing Skhul VII was studied.

Skhul I, a toddler [2.5 to 4.5 years], was originally given a male sex designation by McCown and Keith (1939:104). Tillier (1995:72) discussed evidence which recommended a female sex determination. The female sex was retained for this study. The toddler was placed in the deposits on her knees, leaning slightly left with the knees pointing south and the buttocks pointing north. All the recovered elements were in anatomical position and articulated. The skeletal elements numbered 24 and the skeletal categories numbered 17. The head was discovered in the highest part of the burial zone. No pit was noted. The left arm was flexed and the hand was under the head. The position of the right arm was not described. The heels rested against the thighs which placed both feet under the buttocks. No carnivore damage was visible on the bones. This toddler had received a perforation injury, caused by a sharp rock or perhaps an antler tool, to the right ear and glenoid cavity (Defleur 1993:126). Several flints were discovered next to the skeleton.

Skhul IV was a male aged 40 to 50 years. The nearly complete skeleton included 25 element categories and 17 skeletal categories in anatomical articulation. No pit was seen in the deposits; but, the head was inclined at an odd angle, back and left, which indicated the head abutted against a barrier. The head lay on its base with the face looking northeast toward the valley. The deceased was buried on his right side. His legs were strongly flexed; the lower legs rested against the thighs. The left arm was strongly

flexed, the hand was drawn up to the face, and the angle of the wrist brought the fingers into a position under the mandible. The right arm was flexed and in front of the left. The axis of the body was approximately east to west [approaching southeast to northwest] (Defleur 1993:128-130). Some pieces of flint were discovered between the hands [nearer to the right hand] of Skhul IV.

Skhul V was a slightly younger male, aged 30 to 40 years. He was also represented by 25 element categories and 17 skeletal categories, all anatomically articulated. He was placed on his back and aligned along a west to east axis. His head pointed west, angled at 90° to the body, and rested on its base. His chin was pushed into his chest. Again, the unusual angle of the head recommended the presence of a pit which was not visible in the deposits (Defleur 1993:130). Skhul V's left arm was flexed across his body, the left humerus parallel to the right, and the left hand at the right elbow. The right arm was flexed and angled away from the body with the hand at head level. The pelvis rotated to the right. Both knees were strongly flexed and the legs leaned to the right with the heels against the base of the pelvis. The mandible of a large boar was discovered between the arms of the corpse (Defleur 1993:132).

Skhul VII, a female aged 35 to 40 years, was found on her right side. Her body was orientated along an east-west axis with the head pointed east. Her head lay on the right side looking toward the valley. Her arms were flexed with the forearms at right angles to the humeri; the hands were brought up to the face. The right hand lay in front of the left. The legs were strongly flexed with the knees against the body (Defleur 1993:132-133). The description of the leg position may indicate a tight flex with the

body in a fetal position; but, no burial plan or photo was included. A total of 23 element categories designating 17 skeletal categories were recovered. No pit was identified and no inclusions were discovered in the deposits.

Skhul VI was represented by cranial and mandibular fragments, left clavicle and arm, left and right leg bones. The feet were absent. The elements categories numbered 12 and included 10 skeletal categories. Skhul VI was a 30 to 35 years old male. The bones of the left leg were in anatomical association. McCown (1939; cited in Defleur 1993:132) felt the deposition was a disturbed burial. Disturbance in this case may also have been some form of curation.

The 50 year old, elderly male, Skhul IX, was marked by 10 element categories and 9 skeletal categories. The areas represented were the calvaria, ribs, vertebrae, sacrum, innominate, left scapula, right hand, left femur, and both feet. The body was disposed on the right side in an east to west orientation. The head angled toward the pelvis. The position of the head implied the presence of a pit. The femur and pelvis were articulated. Both bones exhibited evidence of a perforation injury caused by a wooden shaft or lance (Defleur 1993:135). The occipital and part of the parietal bones demonstrated a fracture. The proffered explanation suggested Skhul IX was surprised by enemies while he slept, wounded by the lance which pinned his thigh and pelvis to the ground; and killed by a blow to the head. This scenario can not be proven or rejected based of the information presented. The cranium of a large bovid intruded on the disposal. The intrusive nature of the bovid deposition did not coincide with the character of an inclusion according to the excavators. Skhul IX may have been a burial disturbed

in antiquity, perhaps by the deposition of the bovid cranium. However, the number of elements recovered and the situation of the remains in the burial diagram, may suggest a secondary disposal with the incorporation of the bovid cranium. This individual was deposited 90 centimeters south of Skhul V (Defleur 1993:133) in the western portion of the site. Skhul V's interment contained a wild boar mandible. A description of the sediments surrounding Skhul IX and the bovid cranium might aid in the discernment of association or lack thereof between the hominid and the mammal remains. Skhul IX was located just over a meter west of Skhul VI. Only the leg of Skhul VI was in association and he may have been a secondary disposal. Otherwise, given their close proximity, the disposals of Skhul VI and Skhul IX may have been disturbed by the same event.

Skhul VIII was denoted by articulated elements of the left and right legs. The 6 skeletal element categories recovered comprised 4 skeletal categories. The tarsal bones were described as obliquely placed in relation to each other. The individual was a male child of 8 to 10 years. McCown believed the disposal was a deliberate inhumation which had been disturbed in antiquity by an intrusive burial or the missing elements had been moved by circulating water (Defleur 1993:133). The body was placed in a natural drainage trench on the terrace. While this deposition may be a disturbed inhumation, the disturbance may be consistent with mortuary processing. The lower limb bones may be the remnants of a more complete skeleton subjected to removal of elements or the limb bones may represent elements brought into the site and deposited. As these hominids regularly hunted and butchered animals, they probably also understood enough anatomy

to place bones into deposits in at least a semi-articulated or anatomical format. The body parts may also have been deposited before decomposition occurred.

The adult male, Skhul III, retained 3 skeletal elements in articulation. These were his left femur, tibia, and fibula. He was recovered under several medium-sized stones in the deepest part of the southeast alcove. The articulation of the elements led the researchers to the conclusion that his skeletal remains were actually part of a larger interment on the terrace (Defleur 1993:127). Like the last individual, this male may have been subjected to curation.

Skhul X denoted an immature male aged 4 to 5.5 years. The disposal may have been disturbed by the inhumation of the female, Skhul VII. The toddler was delineated by 3 skeletal elements from 3 skeletal categories. The mandible, teeth, and right distal one-third of the humerus were the only osseous elements recovered in the lab from the block containing Skhul VII (Defleur 1993:135)..

The final fossil, Skhul II, was not discovered in articulation or anatomical association. This female, aged between 30 and 40 years, was discovered on the east side of the terrace in front of the alcove. She was represented by 8 element categories and 6 skeletal categories. Portions of the upper body and skull were the only areas recovered. These included fragments of the calvaria, mandible, teeth, humeri, ulnae, and left radius. Defleur (1993:127) queried the possibility of a disturbed inhumation. The disarticulation and lack of anatomical association of elements favors a secondary disposal after decomposition of soft tissues. This disposal accords with post-mortem processing or curation of skeletal remains.

BURIAL POSITIONS AND ORIENTATIONS

Body arrangement for the Skhul burial population segregated into three positions: on the knees, on the back, and on the right side.

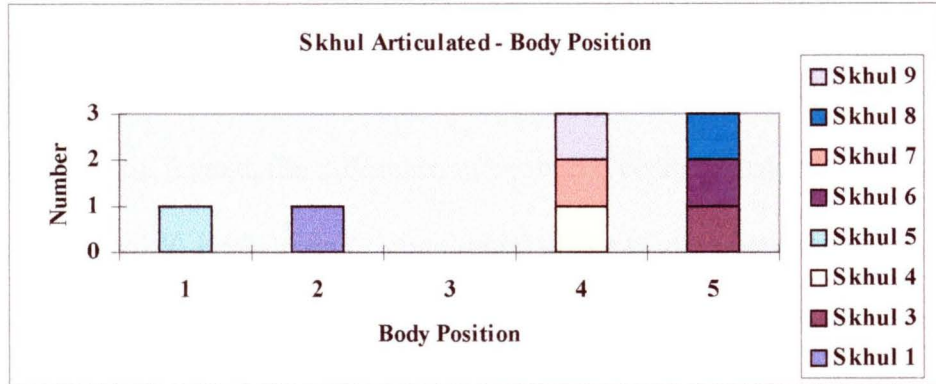


FIGURE 13.1

Legend: 1 - On Back 3 - Left Side 5 - Unknown
 2 - On Knees 4 - Right Side

TOTAL NUMBER OF INDIVIDUALS = 8

The toddler, Skhul I, was placed on her knees. This was an unusual position in the Near East. The only other individual recovered in this position was Shanidar V, an adult male of 35 to 50 years at death. His burial position may have been fortuitous in that his demise and at least partial interment may have been the result of a rock fall or roof collapse in the cave. Another toddler interment recovered in the Near East was the Dederiyeh Infant, aged between 1 and 2 years. This toddler was buried on its back. Skhul I had received a perforation injury to the right ear and glenoid cavity. Her unique disposal position may bear some relationship to her injury or to her sex.

The burial on the back was a male aged between 30 and 40 years at death, Skhul V. The right-sided disposals were a female [35 to 40 years] and two older males,

Skhul IV [40 - 50 years] and Skhul IX [50 years]. The body positions of the three males tended to suggest some distinction based on age and recommended differences in social *personae* between the younger male and the two older males. The placement of the female on the same side as the older males engenders two possible explanations. If she had reached menopause, she may have been considered elderly and in a similar social position as Skhul IV and Skhul IX. In this case, no sexual differentiation is noted. If Skhul VII was still fecund, the difference in her burial position and that of the male of similar age, Skhul V, tends to favor some social differentiation between males and females. Her social position may still accord with that of elderly males.

The individuals of unknown body positions were identified as males: Skhul III, VI, and VIII. One was a child of 8 to 10 years [Skhul VIII] who was represented by a right femur, both tibia, a left fibula, and both feet. Skhul III was an adult of undetermined age and probably male. He was denoted by the left femur, left tibia, and left fibula. His disposal condition was similar to Amud 9 [left tibia, fibula and foot bones]. The final individual, Skhul VI [30 - 35 years], retained more skeletal elements than the other two; but, the left leg was the only region in anatomical association. All three of these disposals may indicate curation. Skhul III and VIII may be secondary disposals. Skhul VI may be a disturbed interment where skeletal elements were removed or a secondary disposal. The only elements in articulation for all three individuals were legs; all three were male; one and possibly two were younger than the more complete individuals placed on their back or right side. This evidence associates with possible age distinctions and/or issues of dominance and subordination. Perhaps the

Skhul population submitted the remains of deceased younger males and possibly subordinate males to some form of post-mortem mortuary processing. The child seems to have attained a similar social position as the two adult males. Puberty usually marks the transition from childhood to more adult status in many hunter-gatherer societies although some groups, such as the Yaghan of South America, segregate male and female children at around the age of 7 years (Service 1978:44).

The disposal circumstance of the female, Skhul II [30 - 40 years] may fit with the condition of younger males discussed in the previous paragraph. Her remains were not recovered in articulation or association. The skeletal elements consisted of the calvaria, some teeth and upper limbs. She was possibly younger than the other female, Skhul VII [35 - 40 years], based on the age ranges. Skhul II's state of disarticulation distinguished her from the other female and most reasonably corresponded with social age or life phase differences between the two females: one may have been in menarch and the other in menopause. If the two females were fairly close in age, dominance and subordination or social status may be designated by the two disposal conditions. An alternative explanation for the difference in the disposal circumstances of the two females may be allied to their locations at opposite sides of the site: Skhul II was on the eastern side of the terrace while Skhul VII rested on the western side. The two females may belong to different social groups periodically occupying the site.

The age range of Skhul II was the same as the range for Skhul V and overlapped that of Skhul VI. If secondary disposal of younger and potentially subordinate adults was a common practice for the Skhul population, Skhul II, may have

been in a similar social position or life stage as the males Skhul III, VI, and Skhul VIII.

Whether the incorporation of upper limbs and no lower limbs marks Skhul II's sex is difficult to determine as the male, Skhul VI, also has some upper limb bones. However, Skhul III, a male, was discovered in the eastern side of the site like Skhul II and was represented by the left leg.

Orientations for the adult burial population of Skhul tended to approach an east to west or west to east axis. According to the burial diagram presented in Defleur (1993:129), the disposal of Skhul IV was approximately southeast to northwest although the axis was between 30 and 40 degrees south of east which more closely approximated an east to west orientation rather than a south to north one. Burial orientations are listed in the following chart.

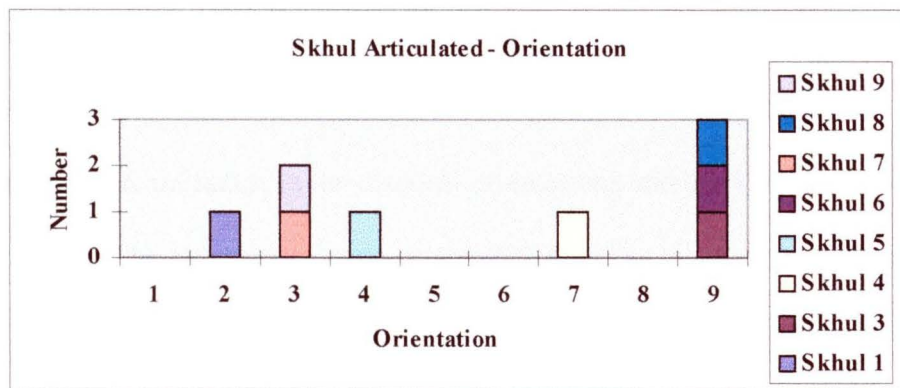


FIGURE 13.2

Legend: 1 - North-South 5 - Northeast-Southwest 9 - Unknown
 2 - South-North 6 - Northwest-Southeast
 3 - East-West 7 - Southeast-Northwest
 4 - West-East 8 - Southwest-Northeast

TOTAL NUMBER OF INDIVIDUALS = 8

The adult male, Skhul V, who was the only individual buried on his back, was also the only individual whose known orientation was on a west-east axis. The

attributes of his disposal reflect those of Shanidar I. Unlike Shanidar I, no significant pathology was described in the literature for Skhul V. The orientation for Skhul V was opposite the other three adults whose orientations were known: Skhul IV, Skhul VII, and Skhul IX. As stated above, all three of these individuals were buried on their right sides. Skhul V was the most central disposal. He was also closest to the border of terrace and the most northern disposal. The two males, IV and IX, were probably older than Skhul V as mentioned in the discussion on burial positions: Skhul V was 30 to 40 years while Skhul IV was 40 to 50 years and Skhul IX was an elderly individual around 50 years. Skhul IV and Skhul V were discovered at the same depth, 1.25 meters below the surface. Depth below surface may be misleading as surfaces are rarely even. The two males were discovered in different areas. Skhul IV was recovered from the alcove in the eastern half of the site, while Skhul V was located on the terrace in a more central location. Skhul IV could have been a member of a different social group who buried their dead at Skhul or age was a significant factor in the disposal orientations and body positions of males.

The older males were orientated along the same axis as the female, Skhul VII. This female may have been considered an older individual as well. Her age was between 35 and 40 years. To reiterate, female transitions in social role often comply with menarche and with menopause. Skhul VII's social role or status distinction may have been similar to the older males based on body position and orientation.

The disposal circumstances of the toddler, Skhul I, agreed with an age related orientation. This immature individual was placed in a south-north orientation on her knees. Although the body position was not consistent with any of the other immature

remains from the Near East, the orientation of this toddler was the same as for the toddler from Dederiyeh, the Dederiyeh Infant.

Left arm positions were known for four individuals: Skhul I, IV, V, and VII.

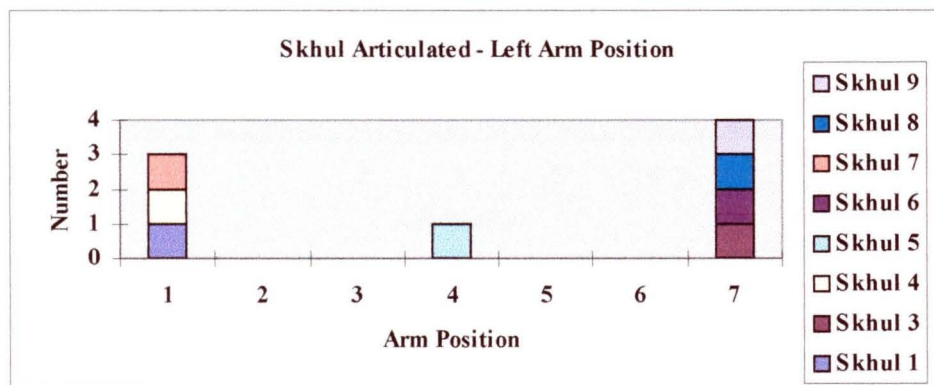


FIGURE 13.3

Legend: 1 - Contracted, hand to head
 2 - Contracted
 3 - Right angle flex, +/-
 4 - Crossed over chest
 5 - Crossed over abdomen
 6 - Extended down body
 7 - Unknown

TOTAL NUMBER OF INDIVIDUALS = 8

The toddler [Skhul I], an older adult male [Skhul IV], and the adult female [Skhul VII] had their left arms contracted with their hands near or at their heads. The toddler's hand was actually under its head. The left arm of the younger male, Skhul V, was drawn across the chest. These left limb attitudes may mark age distinctions between individuals in the prime of their life and the very young and elderly.

Right arm positions were known for three individuals: Skhul IV, V, and VII. Once again, the right arm positions of the older male, Skhul IV, and the female, Skhul VII, were similar while the right arm position of the younger male, Skhul V, was

different. The explanations given previously for the differences between these individuals appertained to this disposal attribute.

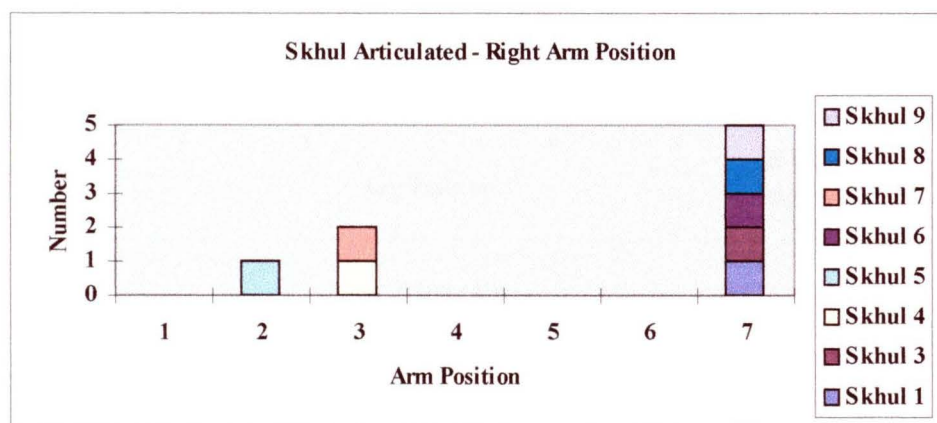
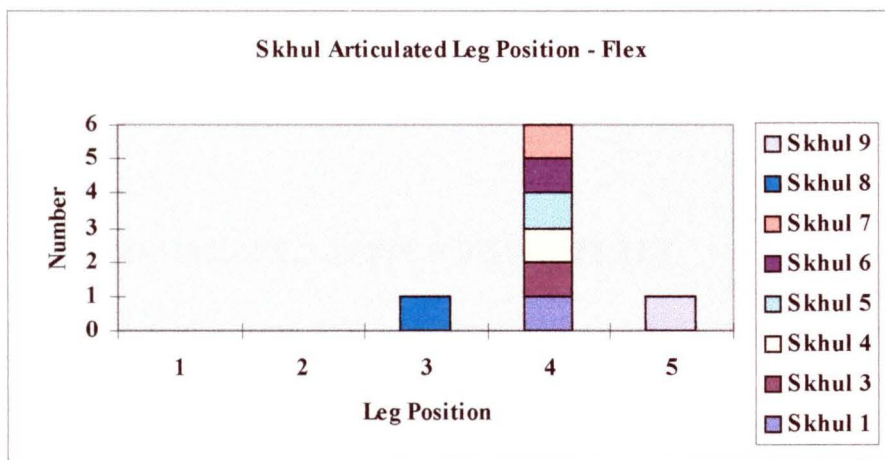


FIGURE 13.4

Legend: 1 - Contracted, hand to head 5 - Crossed over abdomen
 2 - Contracted 6 - Extended down body
 3 - Right angle flex, +/- 7 - Unknown
 4 - Crossed over chest

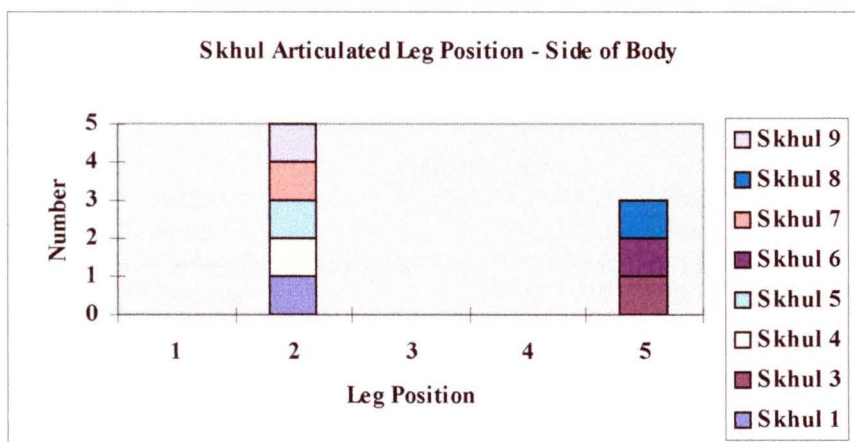
TOTAL NUMBER OF INDIVIDUALS = 8

Leg positions, when known, were remarkably similar for all individuals except Skhul VIII. The toddler, Skhul I, was on her knees so her strongly flexed position was a direct result of this placement. The only other immature individual was Skhul VIII, a male child of 8 to 10 years. His leg position was semi-flexed. All of the adults whose leg positions were known were strongly flexed at a right angle or less to the trunk of the body. Skhul VIII has been previously discussed in association with younger males discovered in the site. The semi-flexed arrangement of Skhul VIII's legs may mark his immaturity.

**FIGURE 13.5**

Legend: 1 - Extended
2 - Almost extended
3 - Semi-flexed
4 - Right angle flex; -
5 - Unknown

TOTAL NUMBER OF INDIVIDUALS = 8

**FIGURE 13.6**

Legend: 1 - Left side
2 - Right side
3 - Opposite sides
4 - No side, extended
5 - No side, on knees
6 - Unknown

TOTAL NUMBER OF INDIVIDUALS = 8

When the sides of the body to which the legs angled were assessed, the following distributions were determined. No side angulations were given for Skhul III, VI, and VIII. Skhul I was actually on her knees leaning slightly on her left side so her

legs were angled slightly to the right side of her body. Therefore, the direction of the legs was the same for all individuals whose leg angulations were known.

INCLUSIONS/ASSOCIATED ARTIFACTS/FEATURES

Materials consistent with potential inclusions were discovered in association with three disposals: Skhul I, Skhul IV, and Skhul V.

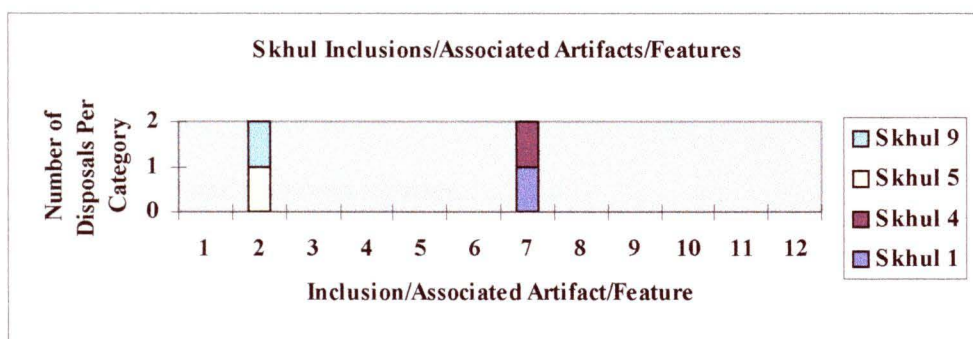


FIGURE 13.7

Legend: 1 - Antler
 2 - Bone
 3 - Carboniferous substance
 4 - Charcoal
 5 - Hearths
 6 - Limestone Blocks
 7 - Lithics
 8 - Ocher
 9 - Plant Pollens
 10 - Shell
 11 - Stones
 12 - Teeth

TOTAL NUMBER OF INDIVIDUALS = 3

The excavation of the disposal of Skhul I exposed flint pieces without retouch near the toddler's skeleton. Although Garrod considered these flints fortuitous inclusions, they may be deliberate offerings. The deliberate or fortuitous nature of these inclusions cannot be determined based on the information presented. However, their incorporation is consistent with some of the other immature articulated disposals in the Near East. One other toddler from this region, the Dederiyeh Infant, had a triangular flint

placed on its body in the region of the heart. No sex has been assigned to this toddler. The infant, Shanidar VII, had a large flint deposited 2 inches from its cranium. This deposition may also have been fortuitous. However, the potential for a recurrent pattern must be considered. Other forms of inclusions have also been recovered in association with immature remains. Amud 7, an infant, displayed a portion of red deer maxilla across its pelvis. Ocher fragments were recovered in the fill matrix surrounding Qafzeh 10 and 11. Qafzeh 11 also had a deer antler on his arms and a fragment of an ostrich egg shell on his chest. Pollens from flowering plants were found with the Shanidar IV Complex which included the Shanidar IX infant. Skhul I and Qafzeh 11 also shared a similar feature: both had received injuries.

Flints were discovered between the hands of Skhul IV. The cluster of lithics between this individual's hands tended to advocate deliberate inclusion. The calculated nature of this inclusion was supported by the positioning of Skhul V's potential inclusion. This burial offering was a relatively complete mandible of a large wild boar [*Sus gadarensis*] which rested between the arms of the corpse. Large bovids were the dominant fauna recovered in the site. Wild boar remains were part of the faunal assemblage from Skhul; however, the remains were generally very fragmentary (Defleur 1993:135). Mammal mandibles were also found in association with Shanidar II and Shanidar V.

The bovid cranium recovered with the remains of Skhul IX was included in the chart. The crushed bovid cranium was relatively complete: only the horns and posterior region were missing (Defleur 1993:134). As stated above, the faunal bones

from the site of Skhul were extremely fragmentary. Again, a description of the sediments surrounding these remains might elucidate the association between the bovid remains and Skhul IX.

SKELETAL PATTERNS

A total of eighteen individuals were recovered as disarticulated remains. The next chart exhibits the skeletal distribution of these remains. Skhul II and Skhul X were the only disarticulated fossil occurrences to be provenienced. Skhul II was a female aged between 30 and 40 years. Skhul X was likely an immature male aged between 4 and 5-1/2 years at death. Of the sixteen isolated fragments, none were given age estimations. The only isolated element to receive a sexual diagnosis was Skhul 14. This individual was identified as a female and was marked by a right tibial diaphysis.

Crania or cranial fragments were recovered for Skhul II, Skhul 21, and Skhul 26. Skhul 26 was a calcined fragment. The mandibular remains belonged to Skhul X and Skhul 11. Skhul II and Skhul X were the only disarticulated remains for which teeth were recovered. No isolated teeth were mentioned as fossil discoveries in this site. The balance of the remains belonged to the appendicular regions of the body. The humerus [7], the femur [4], and the tibia [3] were the long bones with the highest frequency of representation among the disarticulated remains. Skhul II had 3 left sided elements to 2 right sided elements which were allocated to the upper appendicular skeleton. Skhul X only retained one appendicular element, the right distal 1/3 of the humerus.

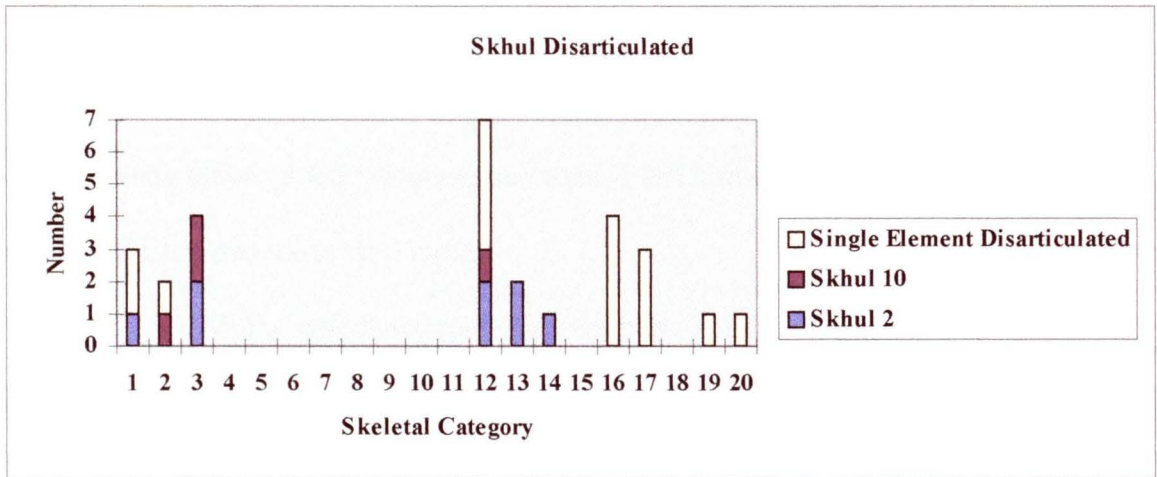


FIGURE 13.8: Skeletal Distribution

- | | | | |
|----------------------------|-----------------|-----------------|-----------------|
| Legend: 1 - Cranium | 7 - Clavicle | 13 - Ulna | 19 - Patella |
| 2 - Mandible | 8 - Sternum | 14 - Radius | 20 - Foot Bones |
| 3 - Teeth | 9 - Sacrum | 15 - Hand Bones | |
| 4 - Hyoid | 10 - Innominate | 16 - Femur | |
| 5 - Vertebrae | 11 - Scapula | 17 - Tibia | |
| 6 - Ribs | 12 - Humerus | 18 - Fibula | |

TOTAL NUMBER OF INDIVIDUALS = 18

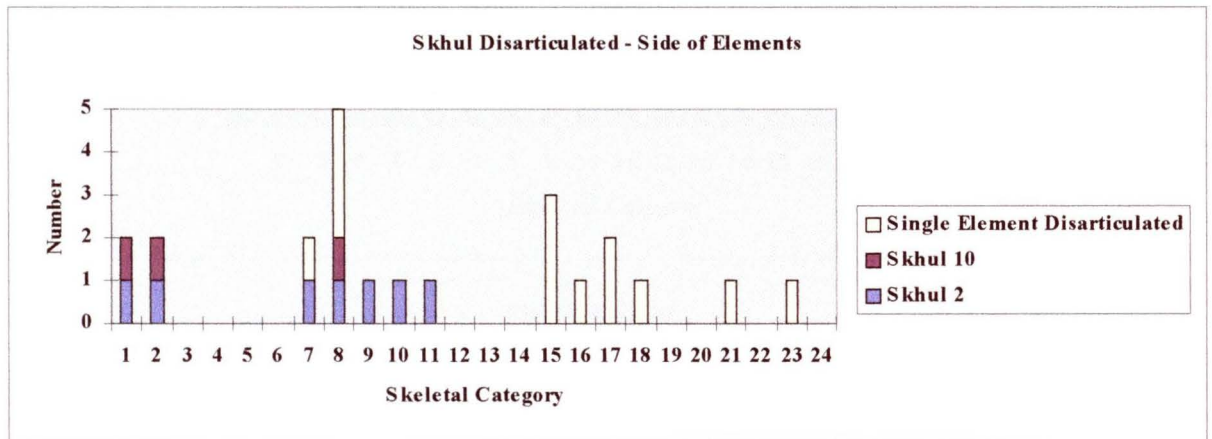


FIGURE 13.9

- | | | |
|------------------------------------|-----------------------|-----------------------|
| Legend: 1 - Maxillary Teeth | 9 - Left Ulna | 17 - Left Tibia |
| 2 - Mandibular Teeth | 10 - Right Ulna | 18 - Right Tibia |
| 3 - Left Clavicle | 11 - Left Radius | 19 - Left Fibula |
| 4 - Right Clavicle | 12 - Right Radius | 20 - Right Fibula |
| 5 - Left Scapula | 13 - Left Hand Bones | 21 - Left Patella |
| 6 - Right Scapula | 14 - Right Hand Bones | 22 - Right Patella |
| 7 - Left Humerus | 15 - Left Femur | 23 - Left Foot Bones |
| 8 - Right Humerus | 16 - Right Femur | 24 - Right Foot Bones |

TOTAL NUMBER OF INDIVIDUALS = 15

The proportion of left to right humeri associated with individuals marked by single elements was 1 left to 3 right. Left-sided lower limb bones predominated with the following ratios: 3 left femurs to one right, 2 left tibias to 1 right; 1 left patella to 0 right; and 1 left metatarsal to 0 right.

All the articulated remains were missing skeletal elements.

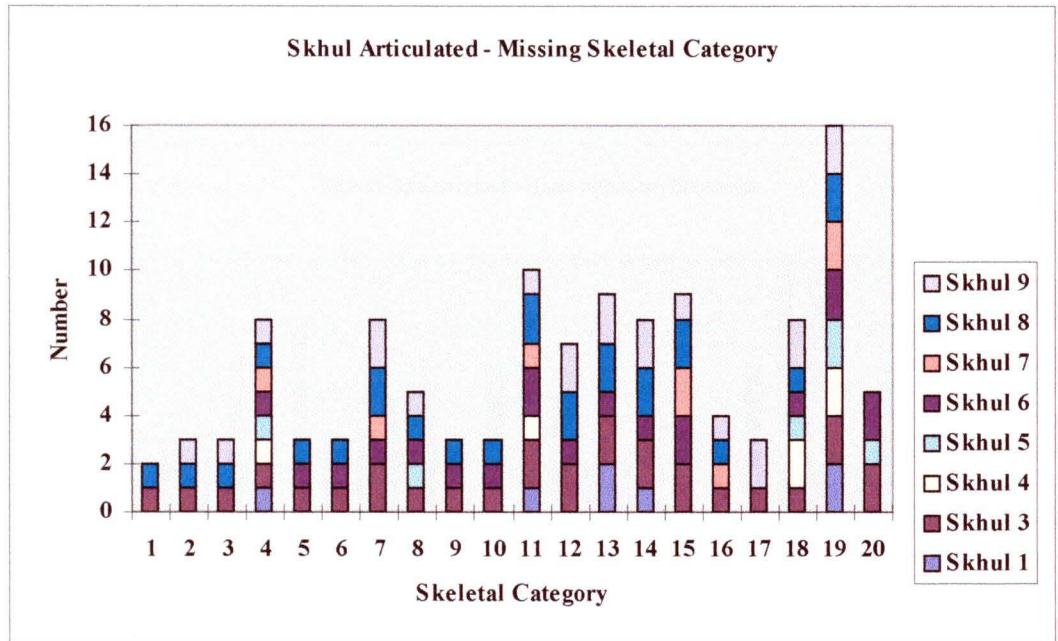


FIGURE 13.10

- | | | | |
|----------------------------|-----------------|-----------------|-----------------|
| Legend: 1 - Cranium | 7 - Clavicle | 13 - Ulna | 19 - Patella |
| 2 - Mandible | 8 - Sternum | 14 - Radius | 20 - Foot Bones |
| 3 - Teeth | 9 - Sacrum | 15 - Hand Bones | |
| 4 - Hyoid | 10 - Innominate | 16 - Femur | |
| 5 - Vertebrae | 11 - Scapula | 17 - Tibia | |
| 6 - Ribs | 12 - Humerus | 18 - Fibula | |

TOTAL NUMBER OF INDIVIDUALS = 8

The absence of scapulae, innominates, and other bones from the axial skeleton was not unusual. The axial skeletons of many of the fossil occurrences in the Near East were missing or extremely fragmentary. These fragile bones do not preserve

well in more recent prehistoric burials (personal experience). Missing humeri, femurs, and tibiae are more significant. When these bones are consistently missing from disposals which retain more fragile elements, then their absence is suspect and requires further investigation.

Two crania were missing and two cranial fragments were discovered among the single element remains. Three mandibles were absent, one mandibular fragment was removed as an isolated element.

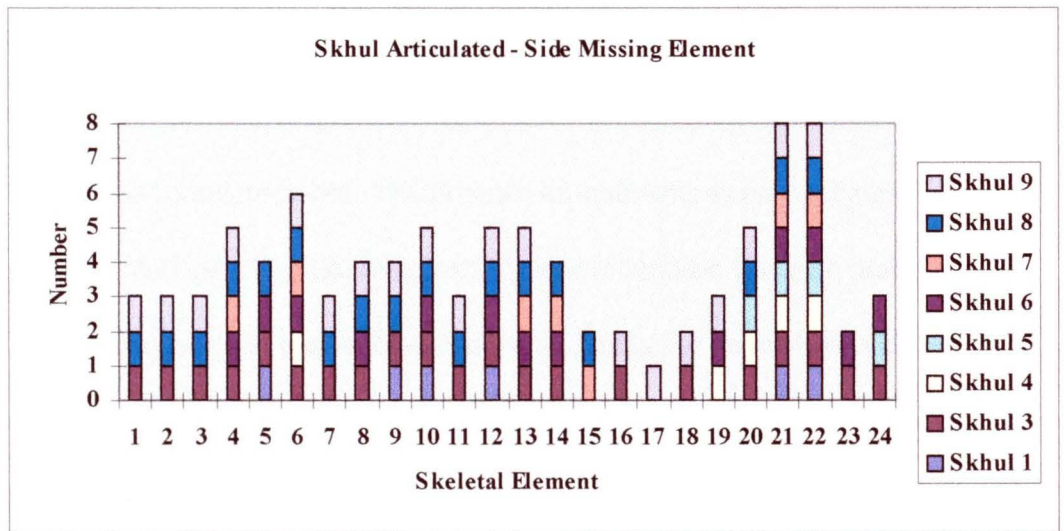


FIGURE 13.11

- | | | |
|------------------------------------|-----------------------|-----------------------|
| Legend: 1 - Maxillary Teeth | 9 - Left Ulna | 17 - Left Tibia |
| 2 - Mandibular Teeth | 10 - Right Ulna | 18 - Right Tibia |
| 3 - Left Clavicle | 11 - Left Radius | 19 - Left Fibula |
| 4 - Right Clavicle | 12 - Right Radius | 20 - Right Fibula |
| 5 - Left Scapula | 13 - Left Hand Bones | 21 - Left Patella |
| 6 - Right Scapula | 14 - Right Hand Bones | 22 - Right Patella |
| 7 - Left Humerus | 15 - Left Femur | 23 - Left Foot Bones |
| 8 - Right Humerus | 16 - Right Femur | 24 - Right Foot Bones |

TOTAL NUMBER OF INDIVIDUALS = 8

The sides of elements missing from articulated remains are charted above.

Both patella were missing from all of the articulated specimens; only one was found as

an isolated element. Four individuals were missing at least one if not both humeri: Skhul III, VI, VIII, and IX. Four isolated humeri [1 left and 3 right] were recovered. Four individuals were missing femurs [2 left and 2 right] and four isolated femurs fragments were recovered [3 left and 1 right].

Most of the types of isolated elements matched the elements missing from the articulated disposals. These bones need to be checked for association. The types of isolated osseous elements discovered at Skhul were also consistent with those found in the sites of Amud, Dederiyeh, and Tabun C. The disposal condition of Skhul III resembled that of Amud 9.

The isolated, single element remains were extremely fragmentary and rarely represented complete bones. Disturbance of inhumations may account for the fragmentation and dispersal of the remains. However, curation was also indicated. The presence of the fragmentary elements which were identical to the elements absent from the corpses in the interments may recommend removal and display or some undisclosed use of skeletal elements. The fragmentary pieces need to be examined for evidence of carnivore damage and cutmarks. One of the cranial fragments was calcined [Skhul 26]. The degree of fragmentation of the isolated elements, particularly limb bones, and the evidence of burning on one cranial fragment could indicate cremation or cannibalism. Carnivores and other animals, such as wild boar, cannot be eliminated as perpetrators of the damage based on the present state of the information.

Since the articulated and disarticulated remains from Skhul were all found in layer B, the postulated disturbances of interments were relatively contemporaneous

with the disposals. The traces of taphonomic history left on the highly fragmentary, disarticulated remains requires re-examination to assist in the elucidation of the agencies of disturbance.

SUMMARY

The disposal area at Skhul was the exposed terrace and southeast alcove. The terrace was the northernmost part of the site. Skhul has been described as a cemetery and not a habitation site. The distribution of skeletons across the terrace may fit with this explanation. Perhaps the cave and the area under the rock overhang were the occupation zone of Skhul. None of the disposals were recovered under the overhang. In general, adults were situated around the periphery of the terrace and alcove region. Immature individuals were placed behind the adults. One possible exception was Skhul VIII, a child of 8 to 10 years. His position at the western edge of the burial zone and other features of his disposal tend to suggest a more adult status for this child and to indicate he was probably an adolescent. The separation of Skhul II, III, and IV from the main cluster of hominids aligns more closely with different social groups, different kinship affiliation, or with intricate social distinctions.

The disposals at Skhul exhibited a mixture of characteristics. Certainly, inhumation was a major aspect of mortuary treatment at Skhul. The fragmentary, yet articulated remains of several individuals also recommended a form of curation or mortuary processing. All of the nearly complete and partial hominids, Skhul I through IX, were missing elements from their disposals. The skeletal elements of the

fragmentary remains, Skhul 11 through 26 corresponded to the many of the elements missing from the more complete disposals. The highly fragmentary, single element fossils occurrences may indicate display of skeletal remains or a more specialized form of mortuary processing such as cremation or cannibalism. Skhul I, Skhul VIII, and Skhul 26 were the only hominids for whom taphonomic processes were discussed or implied. All of the remains must be re-examined for carnivore damage, cut-marks, or any other taphonomic indicators..

The most parsimonious explanation for the known Skhul orientations and burial positions were age related. The toddler, Skhul I [2.0 - 4.5 years] was buried on her knees, leaning slightly to the left, in a south to north orientation. The middle aged male was buried on his back on a west to east axis. The burial patterns of the older individuals were on the right side with approximate east-west orientations. The different types of interments for males and females may mark different social groups, different kinship affiliations, different burial traditions in different time frames for some of the individuals, or age related social distinctions.

Three possible patterns for male disposals were noted: interment on the back, interment on the right side; and potential secondary burials with some articulation of leg elements. The different natures of these disposals tends to favor some degree of social differentiation and diverse social *personae* for the males. Although these distinctions appeared age related or allied to traditions of different social groups, as discussed in the last paragraph, their character also corresponded with aspects of dominance and subordination. Skhul V was the only individual buried on his back in a

west to east orientation. He was also the most northerly disposal and was placed closest to the border of the terrace. Three males represented potential secondary disposals [Skhul III, VI, and VIII] and two males were buried on their right sides in approximate east to west orientations [Skhul IV and IX]. The attributes of the Skhul V burial may mark his dominance among the males as his was the unique disposal. The same concept of dominance and subordination may apply for the two females. One female was interred and the other was a likely secondary burial.

Some minimal sexual distinctions may be marked by the central position of the males and the peripheral positions of the females. The male child of 8 to 10 years, Skhul VIII, was also positioned at the edge of the deposition. His location may advocate a social standing similar to adults, especially females. His social position, derived from his location, was probably not quite equal to the adult males. This suggestion remains speculative as so much information is absent.

The deposition of Skhul I was curious. If she was a female toddler as Tillier discussed, then her disposal on her knees may have marked her sex. Flints were discovered next to her skeleton. No inclusions were associated with either the articulated adult female [Skhul VII] or the disarticulated one [Skhul II]. Skhul IV was the only adult male to have flint inclusions in his disposal. The toddler had sustained a perforation injury to the right ear and glenoid cavity which had probably caused her death. A pointed rock or antler tool was identified as the kind of implement likely to cause the type of damage exhibited on the cranium. Was the toddler's death accidental or deliberate? Many hunter-gatherers practice infanticide in times of environmental stress such as

famines or to maintain appropriate population levels. Pregnancies may be terminated, nursing infants or toddlers may be killed. Female infanticide is well documented in the ethnographic literature. For example, girls are usually the first sacrificed in Eskimo society (Service 1978:80 - 81). The disposal population at Skhul was predominantly male; seven of the ten who were provenienced were male. If this structure of male predominance was reflected in the living population, then female infanticide was possibly practiced. The toddler's disposal position could accommodate death *in situ*. Warfare is another possible explanation for the circumstances of Skhul I's disposal. Skhul IX also exhibited a perforation injury of the left femur and pelvis. Regardless, the unusual character of Skhul I's disposal requires further investigation. Re-examination of the perforation injury is necessary to decipher whether the cranial injury occurred before or at death or if the damage was the result of post-mortem taphonomic processes. Furthermore, the angle of entry of the wound needs to be ascertained.

Associated artifacts were discovered with two male disposals: Skhul IV and V. The materials retrieved with Skhul IV were lithics. A wild boar mandible was found with Skhul V. The inclusions were found between the arms of both individuals. The similarity of physical situation for these inclusions reflects deliberation. The character of the inclusions may mark some form of totemic³⁹ association or relate to the

³⁹ "Totemism is a religion that uses nature as a model for society" in which "the totems are usually animals and plants" who symbolize the ways people relate to nature (Kottak, Conrad Phillip 1991:339). The Australian Aborigines also used geographical features. A. P. Elkin (1971:537-538) discussed two main types of totemism for the Aborigines. One type aligned with social totemism. Groups of individuals identified with a particular species of animal as a "symbol of common inheritance of flesh and blood which they have received through their mothers, mothers' mothers" (Elkin 1971:537). Dietary proscriptions were applied for the totemic species. Another form which was widely practiced throughout Australia was "cult totemism" (Elkin 1971:538). Groups of males formed societies which affiliated with a totem, usually an animal or bird. These totems were part of the 'Dreaming' and the period was called the Dream-Time. The

activities of the individuals interred. Skhul V was a middle age male who was probably still actively hunting. The incorporation of the boar mandible may be in recognition of an involvement in hunting. The older male may have been less able to hunt and more confined to occupation sites. He may have become an accomplished knapper and this activity was registered by his inclusions. These considerations are speculative and require extensive investigation.

Formal analysis was difficult to apply due to the distortion created by the lack of information on the highly fragmentary single elements and missing information on the less complete articulated or associated remains. Some redundancy was apparent. Males were either partially articulated and associated or completely articulated. The completely articulated disposals retained potential inclusions while the partial ones did not. Completely articulated disposals were specifically defined by the combination of attributes of orientation and body position which were aligned with age distinctions. Females were either articulated or disarticulated. Only one female disposal, Skhul I, contained potential inclusions. This individual was a toddler. Some ascribed status for this toddler may be indicated. Adult female disposals did not incorporate inclusions.

In summation, the nature of the disposals at Skhul strongly suggest the maintenance and representation of social distinctions allied to age, particularly for adult males. Some minimal sexual differentiation was indicated by the absence of inclusions for adult females and by the predominance of male disposals in the site. Social *personae* appeared to be relatively complex.

Infants were not included in the burial population at Skhul nor were they indicated for the fragmentary remains. None of the sixteen isolated elements were aged and fifteen were not sexed. Therefore, the absence of infants may be more apparent than real. If infants were present, they were extremely fragmentary or the taphonomic conditions at Skhul inhibited their preservation as skeletal remains.

The absence of information on the isolated remains, especially the precise positions and orientations of the elements recovered, restricts further analysis.

Chapter 14: REGIONAL PATTERNS

The major thrust of this chapter is to examine the seemingly diverse site specific disposal patterns to see how they correspond in terms of temporal and regional perspectives. The intent is to see if this broader view of the disposal patterns assists in the clarification of the variety of implications and explanations offered for the site patterns. Although most of the disposal patterns in the Near East appeared site specific, particularly in the five sites analyzed, some marked similarities existed. The most remarkable of these affinities was the evidence for age distinctions demonstrated to a greater or lesser degree in all five sites. The selection of a specific area for the disposal of the dead was a consistent feature in at least four of these sites.

The differences between sites were compatible with specific social or cultural group traditions. Indeed, comparisons of the total complex of patterns represented in each site were consistent with comparisons of social groups and more informative in a 'cultural' sense. For each site, the individuals were identified by the whole complex of features related to the disposals which served to mark individuals by age, perhaps sex, and possibly social role or status: (1) location of a disposal zone for the dead in the site; (2) specific spatial allocations within the disposal zone; (3) orientation and position of the body; (4) curation; and (5) inclusions or no inclusions. The use of various combinations of features to denote individuals was intricate and highly symbolic.

Striking similarities were discerned in the burial attributes of several individuals from different sites. Marked differences between individual interments

within a single site were also noted. These similarities and differences may be indicative of broader cultural or social traditions. In order to resolve the meaning and relevance of these similarities and differences, this chapter considers the burial and skeletal patterns before the locational ones.

BURIALS

Numerically, more articulated skeletal remains were discovered in the earlier sites of Qafzeh and Skhul. Shanidar also complied with the pattern of more potential burials. This site is located in an isolated region, away from the coast and within a Mountain Range. The Carbon-14 dates for the site of Shanidar may also be incorrect. The time frame for the occupation of the site may be older. Otherwise, Shanidar may have experienced different types of climatic and environmental pressures compared to contemporaneous sites in other localities or similar pressures may have been induced at different times. The Kebara, Amud, Tabun, and Dederiyeh populations also practiced inhumation although fewer primary inhumations were recovered in these sites.

Fewer females, a total of six, were recovered from postulated primary burials. Interments were identified for fourteen males. Seven hominids were sexually undiagnostic. The ratio of sexually diagnostic males to females was 2.3:1 which indicated that females represented less than one-third of the sexually identified burial population. While these figures appear significant in terms of sexual differentiation, they tend to enhance time compression and obscure temporal trends. Over time the number of diagnostically female skeletons recovered from primary disposals decreased: Qafzeh had

2 females; Skhul had 2 articulated females; Shanidar had 1 female with some anatomical association of skeletal elements; Kebara and Amud yielded no primary female burials.

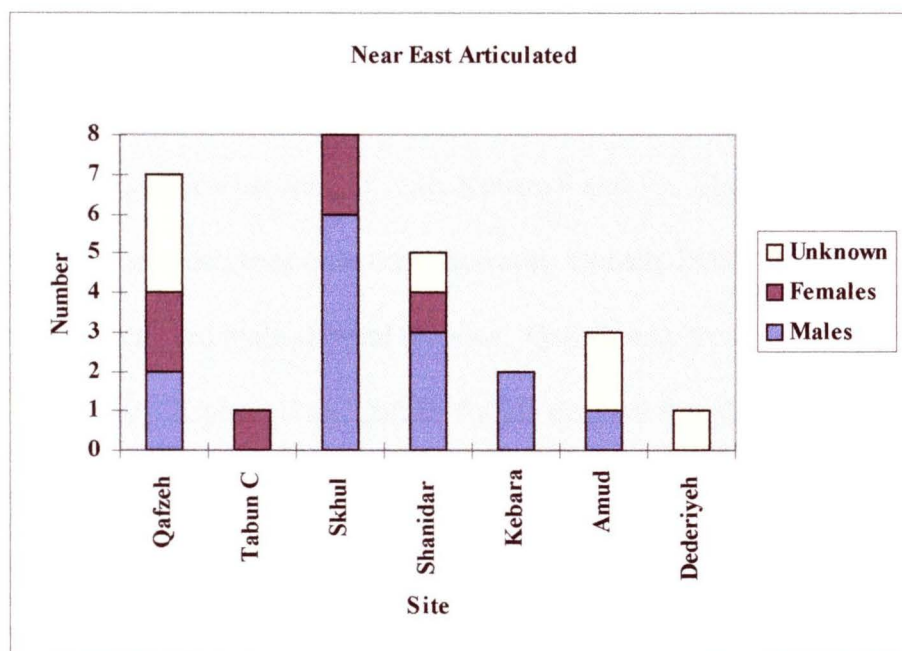


FIGURE 14.1: Sex Distribution

Legend: Total Number of Males = 14
 Total Number of Females = 6
 Unknown = 7

TOTAL NUMBER OF INDIVIDUALS = 27

Using the date ranges established in the thesis, the sites from oldest to youngest were: Qafzeh, Tabun C, Skhul, Shanidar, Kebara, Amud, and Dederiyeh. The Tabun C1 hominid may actually be older than the Qafzeh remains or younger than Qafzeh and Skhul specimens. Shanidar, Kebara, and Amud were given similar ages and were possibly relatively contemporaneous. Dates for Dederiyeh were based on the general dates for sites containing a Tabun B Levantine Mousterian industry which was discovered in this site. The Shanidar II and V males, the Shanidar VIII female, and the

Shanidar IX infant were not included in the chart for the same reasons they were excluded from the site specific analysis.

The decreasing numbers of articulated, diagnostically female skeletons in identified primary disposals tends to correspond to increasing sexual distinctions over time. For the five sites analyzed in detail, very few of the disarticulated remains from the later time frames were described as female: only Kebara 9 and 10. The numbers of primary male disposals also decrease over time; however, Qafzeh, Skhul, Shanidar, and Amud contained disarticulated male skeletal remains. Qafzeh may have retained at least one more original primary disposal if the Qafzeh 6 male disposal was disrupted by the interment of Qafzeh 7.

Qafzeh contained relatively equal numbers of identified, articulated males and females: 2 males [Qafzeh 8 and 11] and two females [Qafzeh 3 and 9]. One of these males, Qafzeh 11, was an adolescent. This equality in numbers, as well as other features of the disposals, in Qafzeh tended to recommend minimal sexual differentiation.

The age categories included on the age distribution chart are those for which articulated skeletons were recovered. The Qafzeh articulated disposal population demonstrated the broadest demographic spread incorporating individuals from all age categories except infants and toddlers. Over time, immature individuals between the ages of 5 and 15, the child through adolescent age categories, did not appear as articulated remains. They were incorporated in the disposal zone as disarticulated elements, most frequently represented by teeth.

disarticulated and represented by three skeletal categories [mandible, teeth, and a partial humerus]. The evidence tended to favor a temporal change in mortuary practices which probably aligned with temporal changes in cultural behavior and social structure. Skhul may mark the beginning of some form of ascribed status for certain very young individuals who died prior to weaning and the emergence of achieved status for all others, including adults.

BODY POSITIONS

The positions of the bodies in the disposal units differed from site to site and also varied within the sites. Body positions in some sites were allied with orientations and location within the disposal zone as age and/or sex indicators. The association of body positions with criteria of age, in particular, and possibly sex reduces the likelihood of inhumation by natural processes.

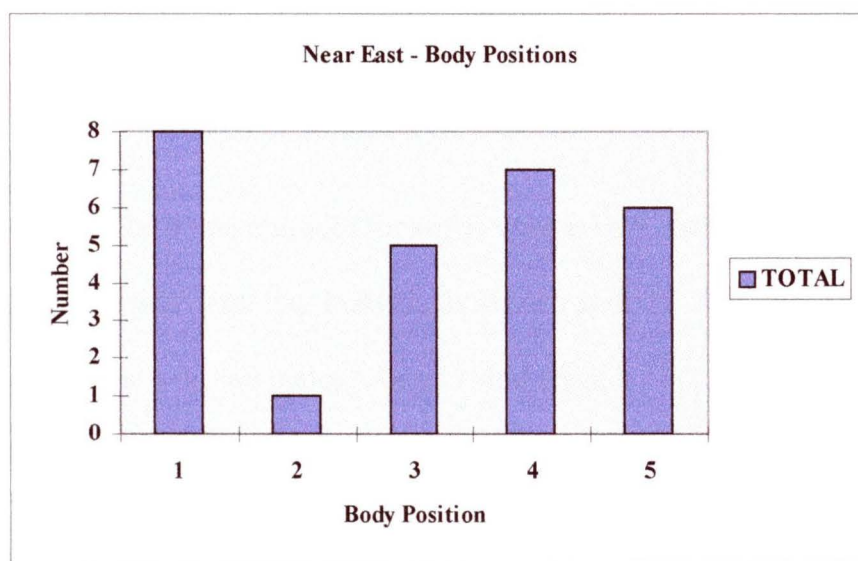


FIGURE 14.3

Legend: 1 - On Back 3 - Left Side 5 - Unknown
 2 - On Knees 4 - Right Side

TOTAL NUMBER OF INDIVIDUALS = 27

The previous chart provides a summary of the body positions noted for the disposals of articulated remains in the Near East. Exclusions from this chart were those mentioned previously: Shanidar II, V, VIII, and IX. Dederiyeh and Tabun were added to the list.

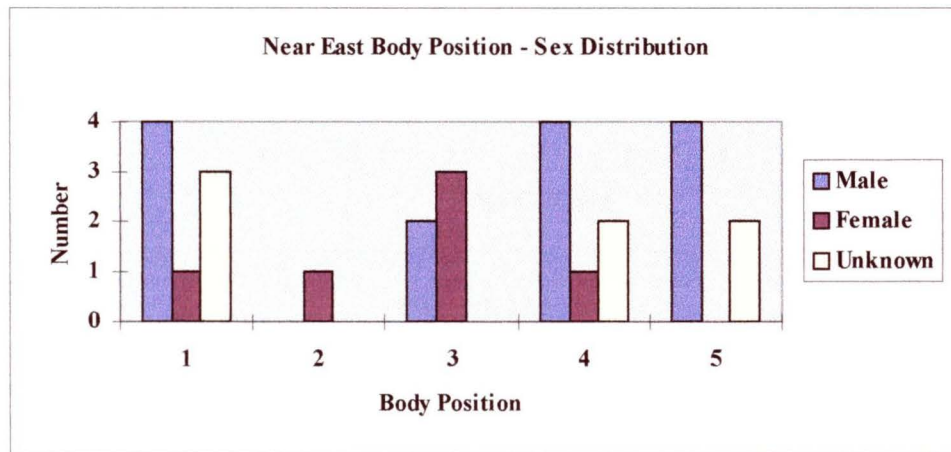


FIGURE 14.4

Legend: 1 - On Back 3 - Left Side 5 - Unknown
 2 - On Knees 4 - Right Side

Total Number of Males = 14
 Total Number of Females = 6
 Total Number of Unknown = 7
TOTAL NUMBER OF INDIVIDUALS = 27

The burial attitudes for males were evenly distributed between the ‘on back’ and ‘right side’ with four individuals in each attitude. The ‘left side’ placement was described for only two males: Amud I and Shanidar IV. Females were most frequently positioned on the left side. One female ‘on back’ burial [Tabun C1] and ‘one female right-sided’ burial [Skhul VII] were recovered. The female discovered on her knees was the Skhul I toddler. One other individual [Shanidar V] was found on his knees; but, the deliberate nature of his disposal condition was questioned.

The next three charts examine each burial position by age category. The 'on knees' situation was described above. The 'on back position' aligned as follows.

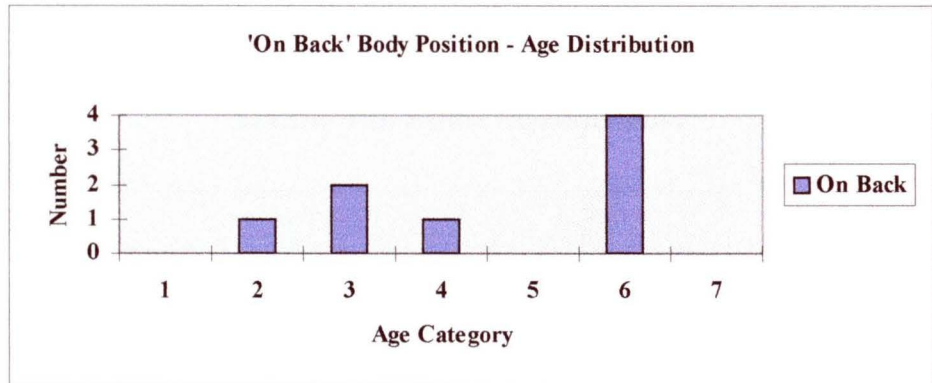


FIGURE 14.5

Legend: 1 - Infant
 2 - Toddler
 3 - Child
 4 - Child/Adolescent
 5 - Young Adult
 6 - Adult
 7 - Elderly Adult

TOTAL NUMBER OF INDIVIDUALS = 8

Immature individuals in the toddler category [Dederiyeh Infant aged 2.5 - 3 years], child category [Qafzeh 10 aged 5 - 6 years and Qafzeh 15 aged 5 years], and child/adolescent category [Qafzeh 11 aged 10 - 15 year] were recovered on their backs. These fossil occurrences represented the only individuals in these age categories with known disposal positions. Skhul I was an exception. The adults recovered in the 'on back' disposal situation were Kebara 2 [male, 25 - 35 years], Shanidar I [male, 30 - 45 years], Skhul V [male, 30 - 40 years], and the Tabun C1 [female, 30 years]. Kebara 2 and Shanidar I were leaning slightly to the right and Tabun C1 was leaning slightly to the left.

Left-sided interments were indicated for 5 individuals. All left-sided interments were adults and included: Qafzeh 9 [young adult female, 18 - 20 years],

Amud I [adult male, 25 years], Shanidar IV [male; 30 - 45 years], Shanidar VI [female, 20 - 35 years], and Qafzeh 3 [elderly adult female, 30 - 50 years]. Three and possibly four adults discovered in this 'left side' burial situation were relatively young.

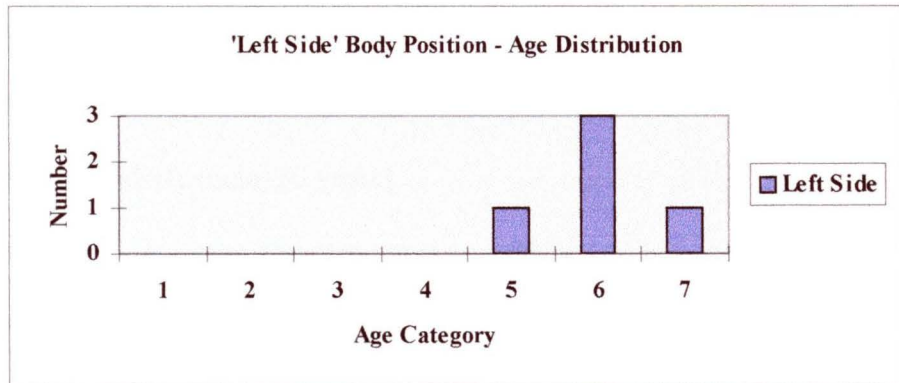


FIGURE 14.6

Legend: 1 - Infant
 2 - Toddler
 3 - Child
 4 - Child/Adolescent
 5 - Young Adult
 6 - Adult
 7 - Elderly Adult

TOTAL NUMBER OF INDIVIDUALS = 5

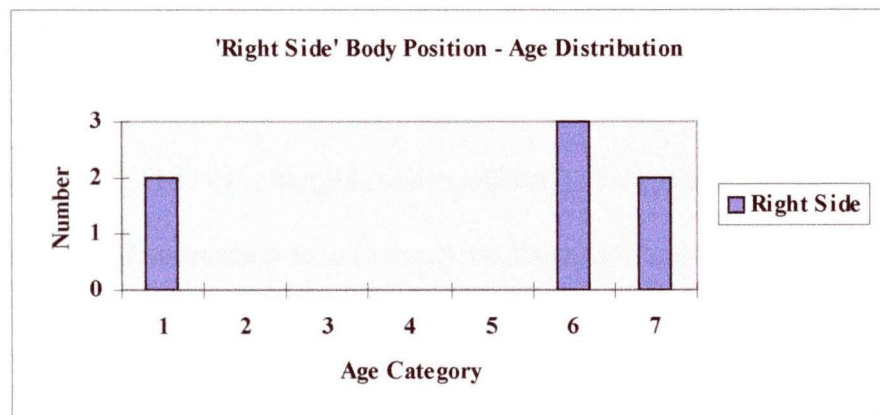


FIGURE 14.7

Legend: 1 - Infant
 2 - Toddler
 3 - Child
 4 - Child/Adolescent
 5 - Young Adult
 6 - Adult
 7 - Elderly Adult

TOTAL NUMBER OF INDIVIDUALS = 7

The individuals recovered as right-sided burials were either infants or adults whose ages were generally older than those from the previously discussed disposals. The infants were Amud 7 [10 months] and Shanidar VII [8 - 9 months]. The adults positioned on the right side were: Qafzeh 8 [male, <50 years], Shanidar III [elderly male, 40 - 50 years], Skhul IV [male, 40 - 50 years], Skhul VII [female 35 - 40 years], and Skhul IX [elderly male, 50 years].

A fairly close correspondence between body positions and age categories was indicated for interments in the Near East. Positions were identified for 21 individuals. Infants were placed on their right sides. Toddlers and children under the age of 15 were situated on their backs. Younger adults were deposited on their left sides. Adults to middle aged adults were discovered either on their backs or on their left sides. The older or elderly adults were interred on their right sides. This pattern followed a rotational sequence from one side to the other and back again: right, back, left, back, and right. In all likelihood, the individual positions suggest socially prescribed life stages or social age. Timing of life stages and transitions between them are not necessarily co-eval with chronological age. Physical changes such as puberty, menopause, physical disabilities or physical deterioration tend to mark the stages and transitions in simpler societies. The toddler, child, and child/adolescent stages were represented in the same fashion which suggested these individuals were in the same life phase, at least in terms of body position. The right-sided placements for infants and adults of advanced age may

mark the dependency of infants and the increasing reliance of the elderly on the social group in general.

Some individual disposals did not coincide with this trend. These outliers were generally adults to middle-aged adults: Qafzeh 3, Shanidar I and IV, Skhul I, Kebara 2 and possibly Tabun C1. Qafzeh 8's age range was fairly broad and he may or may not ally with these age distinctions; however, his physical disability, the crushed talus and digitigrade gait, may be designated in his burial position. Skhul I was discussed previously. This toddler's perforation injury to the right ear and glenoid may bear some relationship to her unique disposal.

For the other outliers, some socially prescribed or temporal explanations can be advanced. Qafzeh was older than the other sites, with the possible exception of the Tabun C deposits. The body positions in this site also associated with the sex of the individuals interred. One explanation for Qafzeh may be allied to location and body position: locations in the site marked age and positions marked sex. The age ranges ascribed to Qafzeh 3 [30 to 50 years] were based on Vandermeersch's (1981:47-48) discussion of her dental wear and cranial suture closure. He described her as elderly. The disposal of Qafzeh 3 was not adequately reported by Neuville which stated she was almost extended on the left side. Based on the description, her disposal position may have resembled that of Tabun C1. She may actually have been placed on the left side of her back. If this was the case, and because of the age ranges for Qafzeh 3, her disposal would agree with other individuals in a middle-aged life phase.

Shanidar IV may be younger in age than Shanidar I, but temporally older than this specimen whose age range was identical. The other major difference between the two individuals was the state of their health. Shanidar I was disabled and the disability may be registered in the disposal attitude. His disabilities aligned with increasing “physical decrepitude” as discussed by Oliver (1989:60) and hence a different social age or life phase than Shanidar IV. In this case, Shanidar IV’s age range fits with the left-side disposal position and Shanidar I’s attitude accords with his disabilities and disposal on his back.

Although the age range for Kebara 2 overlapped with other fossil occurrences in the ‘on back’ position, his minimum age was significantly younger. The cranium of Kebara 2 was absent. Cranial sutures, tooth wear, and stage of epiphyseal fusion are useful age markers. Degenerative changes also denote evidence of chronological age. Kebara 2’s skeletal remains exhibited several indicators of stress, trauma, and age related changes. The majority of these changes were described as benign (Duday and Arensburg 1991:191). Some changes were more significant such as the advanced osteoarthritis of C2-C3, sciatica of S1, and a possible pleural irritation. In general, the condition of the skeleton, the age range assigned to the individual, and the health status do fit with the ‘on back’ association with more middle aged individuals.

Usually osteologists and forensic scientists determine age ranges not a specific age. The age for Tabun C1 was given as 30 years. Her age range estimation is likely broader. The age given does tend to position her within the middle range of the females discovered in the Near East and generally supports her ‘on back’ position

particularly as the life stage transitions appeared to be differentially timed for males and for females as discussed below.

The age ranges of the adult disposals tended to indicate transitions occurred earlier for females than for males. For example, Qafzeh 9 [18 - 20 years] and Shanidar VI [20 - 35] were left sided burials. Males on the left side were generally older: Amud 1 [approximately 25 years] and Shanidar IV [30 to 45 years]. The males' age ranges were similar to the female Tabun C1 [30 years] in the 'on back' position. Males in the 'on back position were generally older and aged between 30 to 45 years with the possible exceptions mentioned previously. The right-sided female [Skhul VII] was 35 to 40 years which was a similar age range as the males positioned on their backs. The age distribution of the right-sided male disposals was between 40 and 50 years.

Arm positions varied considerably between individuals within a site and between sites. Left arm positions were described for sixteen of the twenty-seven disposals and right arm positions were depicted for fourteen depositions. The most frequently represented left arm position was contracted with the hand brought up to the level or vicinity of the head [6 individuals]. The right angle flex, plus or minus, to the body; the crossed over chest and the extended down the body arm positions were equally represented for left arms [2 individuals each]. Right arms were most frequently extended down the body [5 disposals]. Crossed over the chest was the second most common position [3 disposals]. Contracted with the hand to the head or contracted were equally noted in the right arm positions with 2 each.

The sexual allocation of the arms position are enumerated in the next two charts.

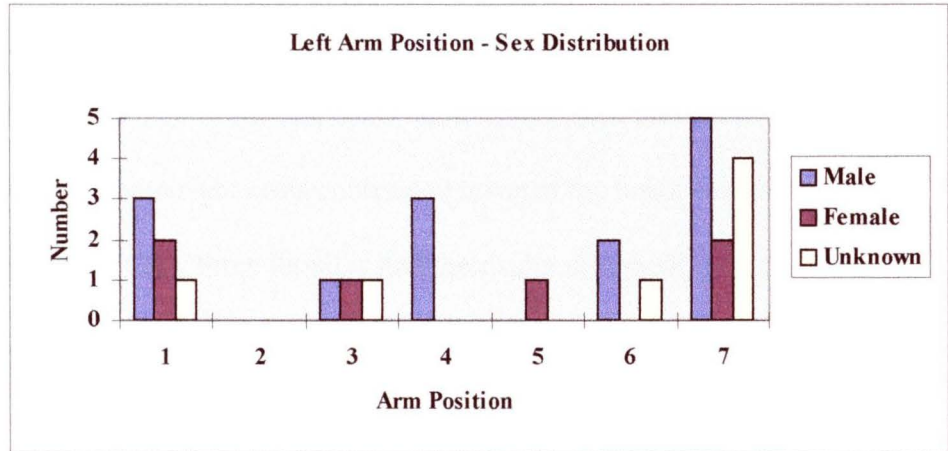


FIGURE 14.10

Legend: 1 - Contracted, hand to head
 2 - Contracted
 3 - Right angle flex, +/-
 4 - Crossed over chest
 5 - Crossed over abdomen
 6 - Extended down body
 7 - Unknown

Total Number of Males = 14
 Total Number of Females = 6
 Total Number of Unknown = 7
TOTAL NUMBER OF INDIVIDUALS = 27

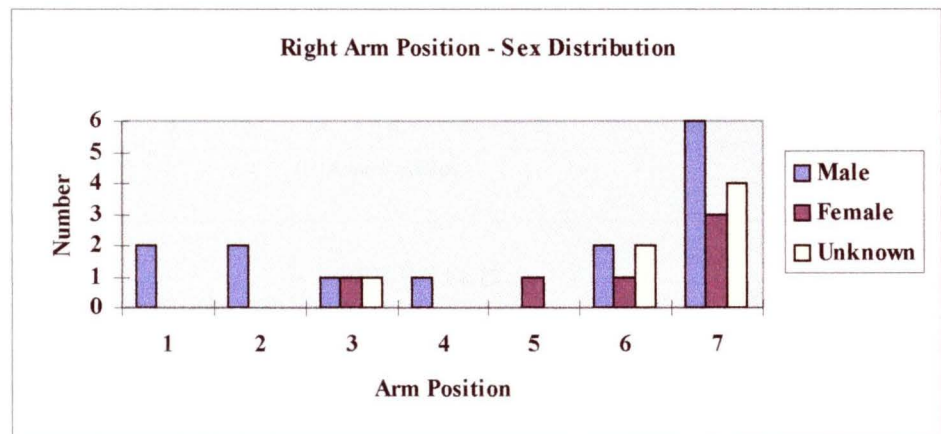


FIGURE 14.11

Legend: same as above

TOTAL NUMBER OF INDIVIDUALS = 27

No particular pattern was indicated by the known left arm positions except no females had their left arm crossed over their chest or extended down their body. No males had their left arm crossed over their abdomen. No individual exhibited a contracted left arm unless the arm was brought back to the head.

Only fourteen of the disposals marked right arm attitudes. None of the females were reported with right arms contracted towards the head, contracted, or crossed over the chest. Only three females had their right arm positions indicated. Too much information was absent to discern any reliable trends in arm position patterning.

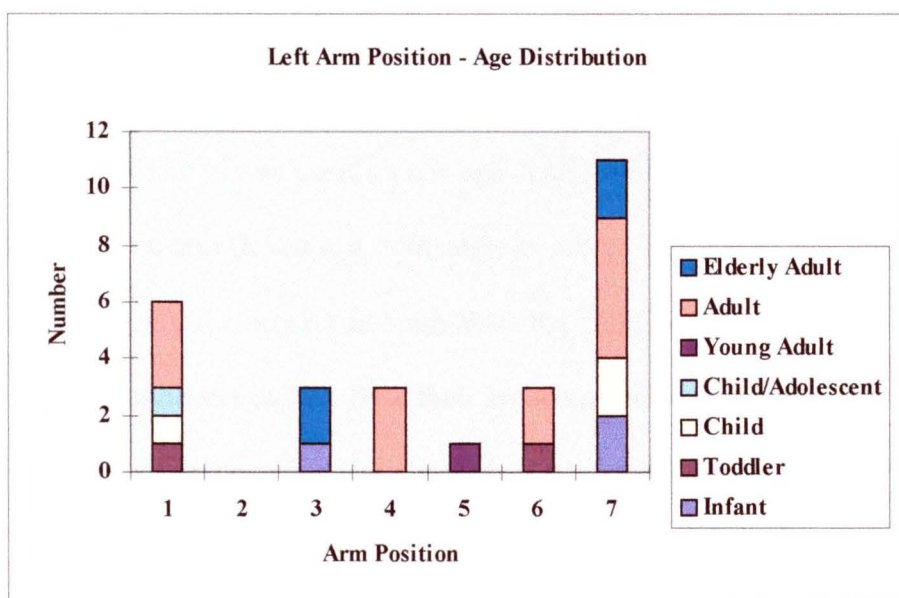


FIGURE 14.12

Legend: 1 - Contracted, hand to head
 2 - Contracted
 3 - Right angle flex, +/-
 4 - Crossed over chest
 5 - Crossed over abdomen
 6 - Extended down body
 7 - Unknown

TOTAL NUMBER OF INDIVIDUALS = 27

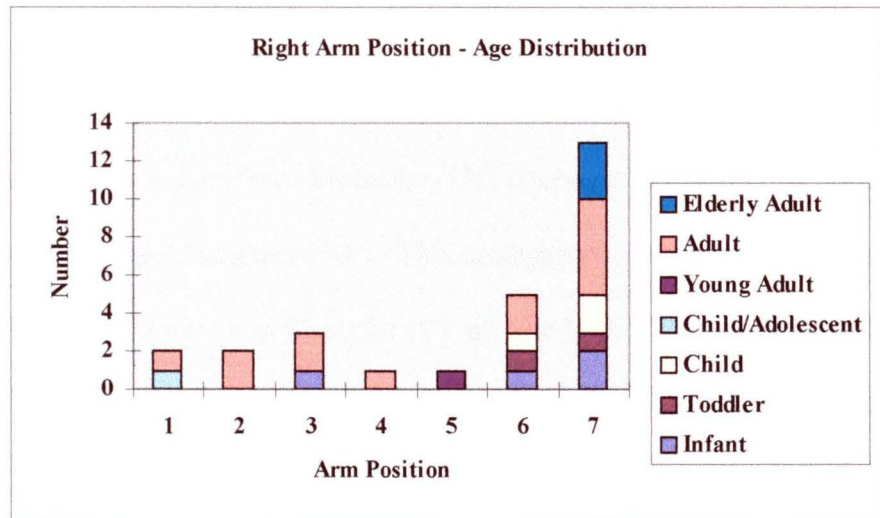


FIGURE 14.13

Legend: 1 - Contracted, hand to head
 2 - Contracted
 3 - Right angle flex, +/-
 4 - Crossed over chest
 5 - Crossed over abdomen
 6 - Extended down body
 7 - Unknown

TOTAL NUMBER OF INDIVIDUALS = 27

A comparison of arm position and age distributions indicated immature individuals had at least one arm flexed at a right angle or more. The arm was frequently brought back to the head, particularly for individuals in the child through adolescent age categories. Immature individuals did not have their arms crossed over their chest or abdomen. Again, too much information was absent to illuminate any reliable patterns in arm position.

A lack of agreement on the use of terms to describe positions of the legs was evident in the literature. For that reason, burial diagrams or photos were used whenever possible to note leg situations. Some degree of flexion of the legs was recognized in a number of the Near Eastern disposals. The two potentially earliest sites, Qafzeh and Tabun C, contained flexed burials. The knees of the Tabun C1 female were slightly flexed [right leg] to semi-flexed [left leg] while almost extended, semi-flexed,

and right angle or tighter flexed legs were discerned in the Qafzeh disposals. Another common feature of the legs was the consistency with which one and more frequently both heels were brought up to the pelvis or buttocks. This characteristic was closely allied with flexed positions of right angles or less. This arrangement of the legs was noted for burials on the left side [Amud I and Shanidar IV], on 'the back' [Qafzeh 11, Skhul V, and the Dederiyeh Infant]; and on the right side [Skhul IV and VII]. The toddler on her knees, Skhul I, also fit this leg pattern.

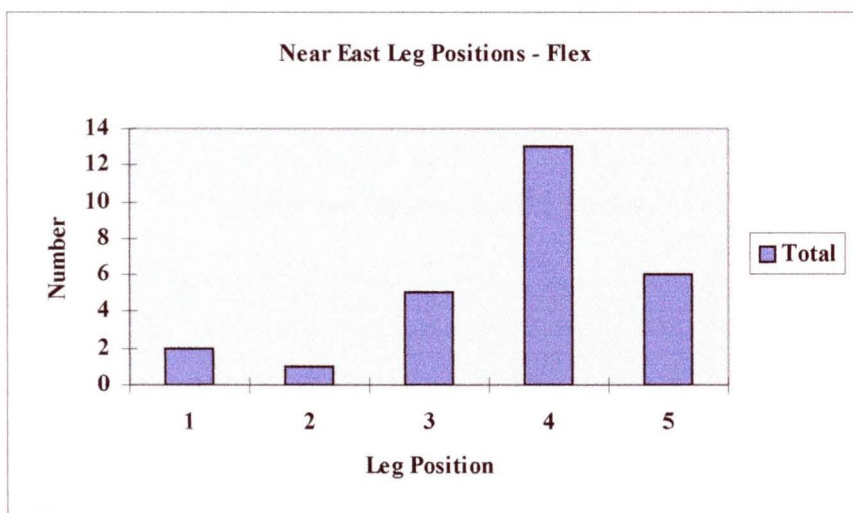


FIGURE 14.14

Legend: 1 - Extended 3 - Semi-flexed 5 - Unknown
 2 - Almost Extended 4 - Right angle flex, -

TOTAL NUMBER OF INDIVIDUALS = 27

The legs of Skhul VII were flexed against the thighs with the knees against the body (Defleur 1993:132-133). This description may indicate a tight flex burial. If so, this disposal was the only one of its kind identified in the Near East.

Kebara 2 was charted as an extended burial. The position of the pelvis and the association between the left femur and pelvis tended to support this allocation. However, the entire right leg as well as the distal end of the left femur, the left tibia, left fibula, and left foot bones were absent from the disposal. Some degree of flexion was possible.

The distribution of leg position was relatively consistent for both sexes. No males were described as almost extended burials and no females were noted as fully extended burials. The most common leg situation in all sites for both sexes was the 'right angle or less' flex in relation to the body.

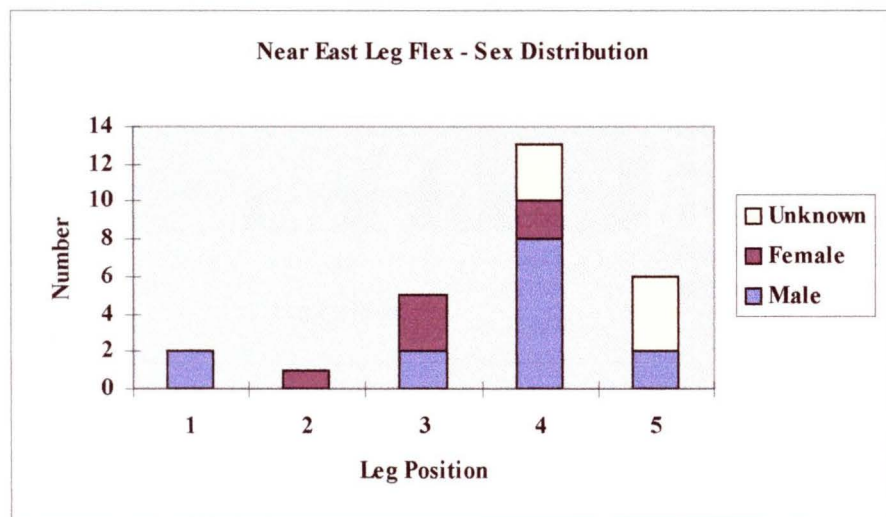


FIGURE 14.15

Legend: 1 - Extended 3 - Semi-flexed 5 - Unknown
 2 - Almost Extended 4 - Right-angle flex, -

Total Number of Males = 14

Total Number of Females = 6

Total Number of Unknown = 7

TOTAL NUMBER OF INDIVIDUALS = 27

When leg positions were analyzed in accordance with age distributions, some distinguishing feature were noted. No immature individuals whose disposal attitudes were known were discovered in a non-flexed position. With the possible exception of Skhul VIII, all immature individuals were situated with the legs at a right angle flex or less to the body. All individuals in adult age categories were placed in the deposits with a variety of leg flex positions. Adults were more frequently discovered with the right angle or less degree of flexion.

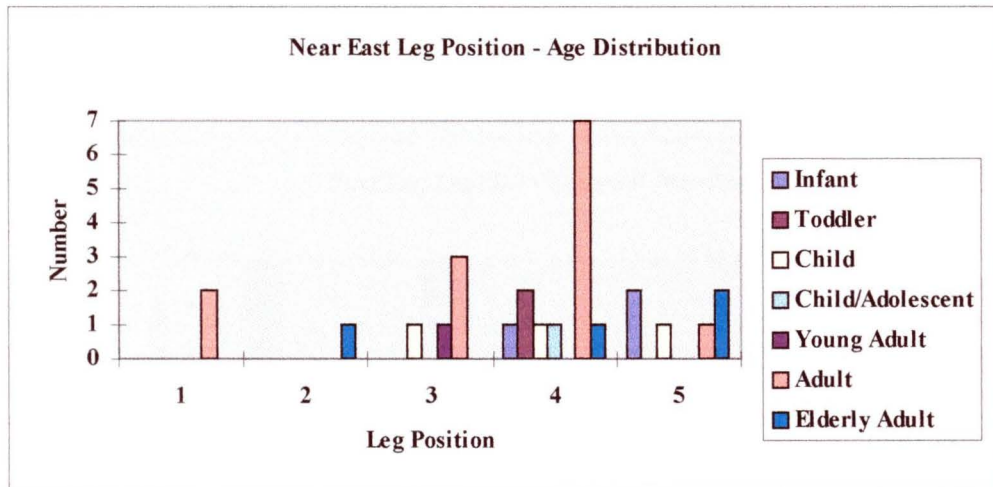


FIGURE 14.16

Legend: Same as previous page

Total Number of Infants = 3

Total Number of Toddlers = 2

Total Number of Children = 3

Total Number of Child/Adolescent = 1

Total Number of Young Adult = 1

Total Number of Adult = 13

Total Number of Elderly Adult = 4

TOTAL NUMBER OF INDIVIDUALS = 27

Adults disposed with extended or likely extended leg positions were Kebara 2 [male, 25 to 35 years] and Shanidar I [male, 30 - 45 years]. These individuals

represented ‘on back’ disposal positions from possibly contemporaneous time frames. The elderly adult in the almost extended position was Qafzeh 3, a female. Adults with semi-flexed leg arrangements were Qafzeh 9 [a young adult female, 18 - 20 years] Qafzeh 8 [male, <50 years], Shanidar VI [female, 20 - 35 years], and Tabun C1 [female, 30 years]. With the possible exception of Shanidar VI, adults in semi-flexed positions were from the older deposits of Qafzeh and Tabun C. To reiterate, the dates for Shanidar may be inaccurate. Adults with more strongly flexed leg dispositions were Amud I [male, 25 years], Shanidar IV [male, 30 to 45 years], Skhul III [adult male], Skhul IV [male, 40 to 50 years], Skhul V [male, 30 - 40 years], Skhul VI [male, 30 - 35 years], Skhul VII [female, 35 - 40 years], and Shanidar III [elderly male, 40 to 50 years].

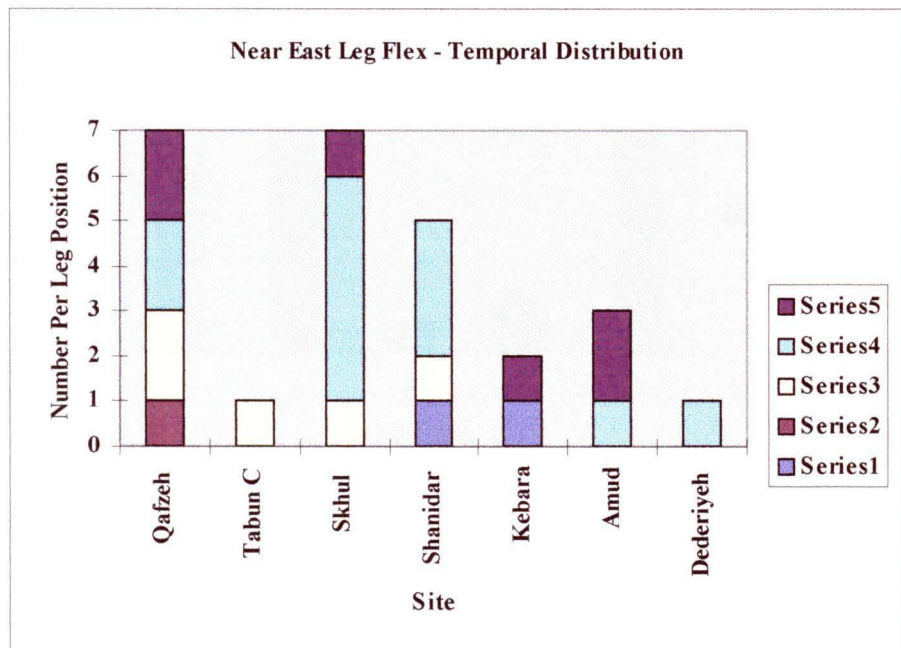


FIGURE 14.17

Legend: Series 1 - Extended
 Series 2 - Almost Extended
 Series 3 - Semi-flexed
 Series 4 - Right angle flex, -
 Series 5 - Unknown

TOTAL NUMBER OF ADULTS = 18

In summary, leg positions for adults in the earlier sites were less strongly flexed than those from later sites. Over time, leg positions became more strongly flexed.

When the direction of angulation of the legs was examined, nine of the twenty-seven individuals had their legs angled to the left sides of the body and seven were angled to the right side. Opposite sides of the body was indicated for one individual, the Dederiyeh Infant. The position of the right leg of this toddler may indicate the leg was originally bent with the knee up. No side of the body agreed with extended positions and accorded with two 'on back' disposals: Kebara 2 and Shanidar 1.

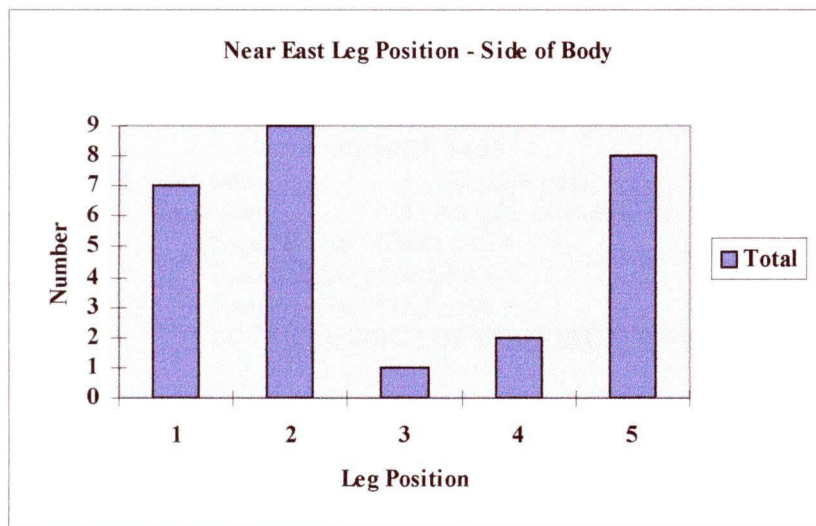


FIGURE 14.18

Legend: 1 - Left side 3 - Opposite sides 5 - Unknown
 2 - Right side 4 - No side, extended

TOTAL NUMBER OF INDIVIDUALS = 27

In fact, the angulation of the legs to one side or the other was generally consistent with the side of the burial. Exceptions to this characteristic were some of the 'on back' disposals from Qafzeh and Skhul. For Qafzeh, the legs were positioned to the

right or the left. For Skhul, the single ‘on back’ disposal was angled to the right side of the body and matched the angulation of the other disposals in the site..

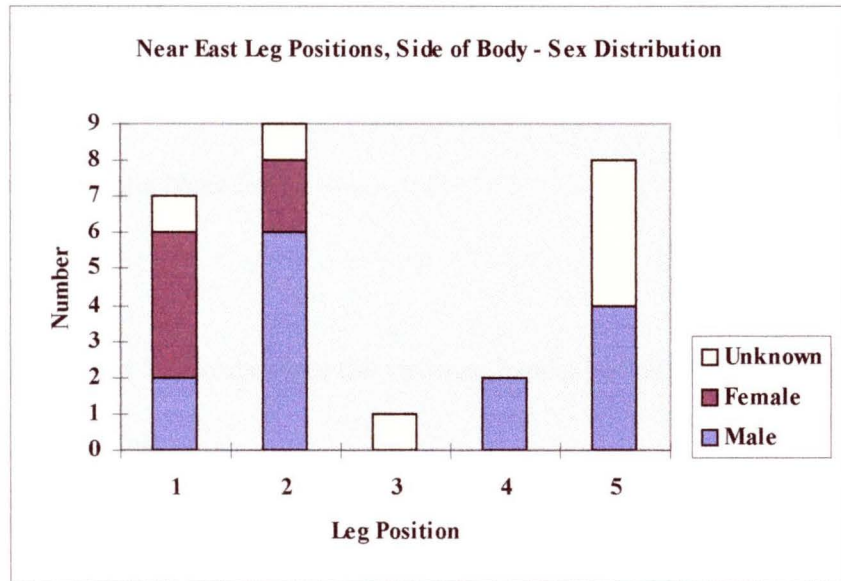


FIGURE 14.19

Legend: 1 - Left side 3 - Opposite sides 5 - Unknown
 2 - Right side 4 - No side, extended

Total Number of Males = 14

Total Number of Females = 6

Total Number of Unknown = 7

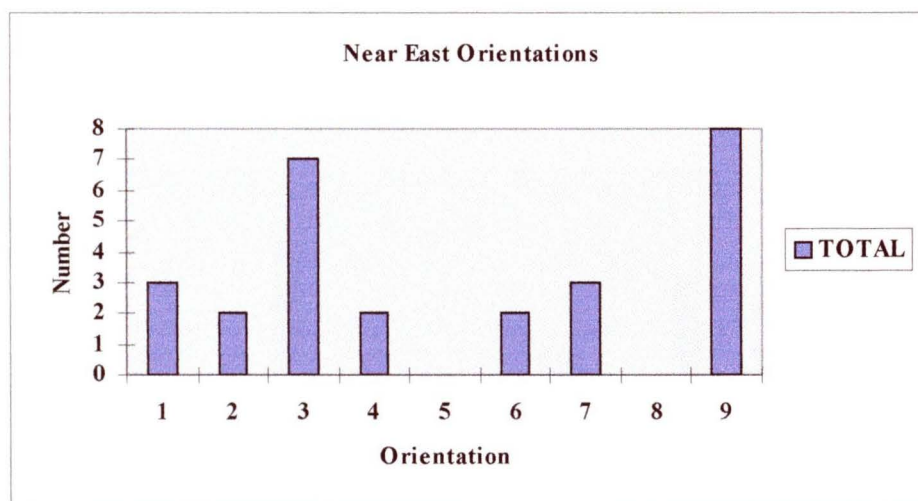
TOTAL NUMBER OF INDIVIDUALS = 27

When the sexual distribution for the side of the body was examined, more males were recovered with their legs angled to the right and more females with their legs angled to the left. On a per site basis, sexual distinctions in accordance with leg positions were not maintained. At Qafzeh, identified females were placed with the legs angled to the left and identified males were positioned with their legs to the right. Tabun C1's legs also angled left and this position agreed with the female position at Qafzeh. No other articulated disposal were discovered in Tabun and the angle of Tabun C1's legs may have absolutely no relationship to her sex. At Skhul, when sides of the body and sex

were known, males and females tended to have their legs angled to the right. At Shanidar, leg angulation and body position corresponded and tended to mark age distinctions. For Kebara, Amud, and Dederiyeh, the side of the body to which the legs leaned agreed with the side of the burial. No identified female interments were discovered in these sites. No regional inferences can be drawn from the angulation of the legs in the disposal for the Near East.

ORIENTATIONS

The chart below exhibits the various disposal orientations identified with Near Eastern inhumations.



Legend: 1 - North-South
2 - South-North
3 - East-West
4 - West-East

FIGURE 14:20
5 - Northeast-Southwest
6 - Northwest-Southeast
7 - Southeast-Northwest
8 - Southwest-Northeast

9 - Unknown

TOTAL NUMBER OF INDIVIDUALS = 27

Bodies were orientated along all axes except perhaps northeast to southwest and southwest to northeast. This is the same axis of alignment with the head location marking the difference. Qafzeh 15 may be the exception to this pattern of exclusion. Defleur's description of a southeast to northwest orientation for this child was contradicted by Vandermeersch's site plan which displayed the child's orientation as more closely aligned with a southwest to northeast axis. The axes of alignment for eight individuals were not mentioned in the literature. Therefore, the pattern of the absence of disposals in the northeast to southwest or southwest to northeast axes of alignment may not be substantiated. As Saxe (1971) discovered, orientations could also have marked the time of day of the burial or the season of inhumation.

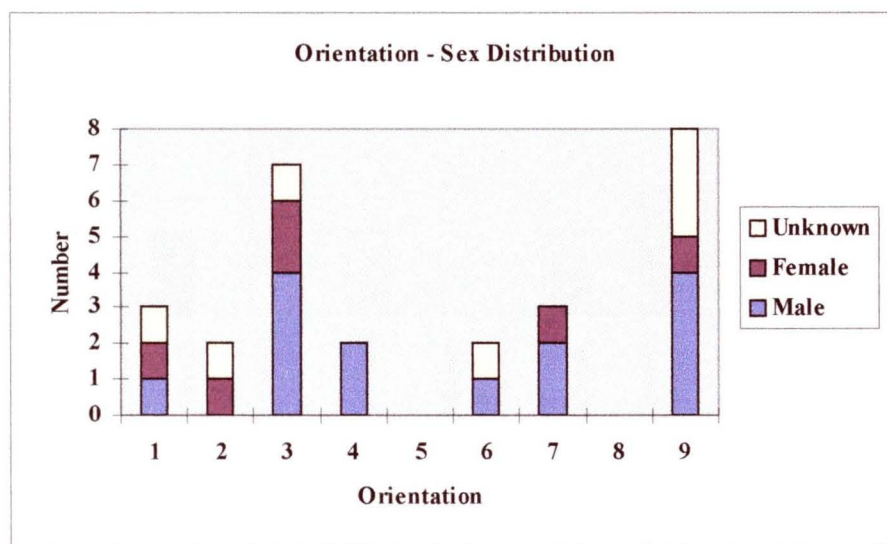


FIGURE 14.21

Legend: 1 - North-South 5 - Northeast-Southwest 9 - Unknown
 2 - South-North 6 - Northwest-Southeast
 3 - East-West 7 - Southeast-Northwest
 4 - West-East 8 - Southwest-Northeast

Total Number of Males = 14

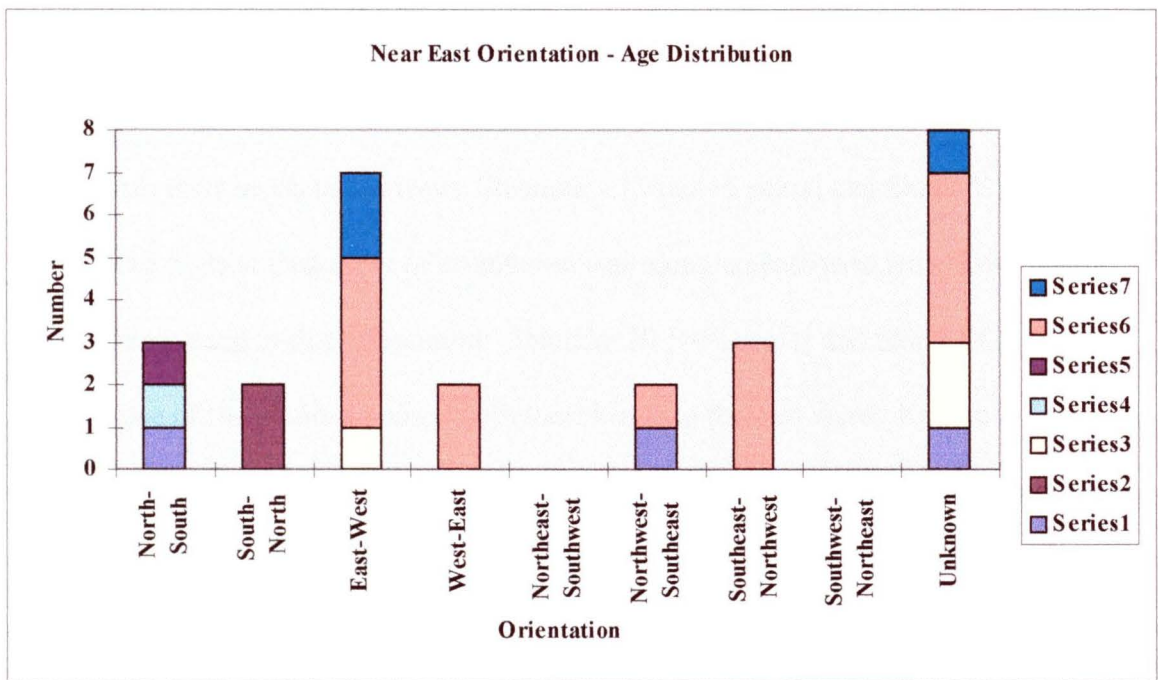
Total Number of Female = 6

Total Number of Unknown = 7

TOTAL NUMBER OF INDIVIDUALS = 27

When the orientations of the interments were examined in relation to the sexual distribution, females tended to follow the cardinal directions for their orientation axes. Shanidar VI was the possible exception. Her orientation was determined on the basis of the situation of her legs and the position of her humerus in relation to Shanidar IV. The estimated orientation may not be accurate. No females were orientated west to east. The axes of alignment for males tended to be more variable.

Some age distinctions were recognized in the orientations of the bodies, particularly when the cardinal directions were applied.



Legend: Series 1 - Infant
 Series 2 - Toddler
 Series 3 - Child
 Series 4 - Child/Adolescent
 Series 5 - Young Adult
 Series 6 - Adult
 Series 7 - Elderly Adult
TOTAL NUMBER OF INDIVIDUALS = 27

FIGURE 14.22

Orientations were not given or estimated for eight individuals. Fourteen of the nineteen individuals whose orientations were known were buried along cardinal direction axes.

Infants were buried with their heads in a northerly direction: Shanidar 7 to the north and Amud 7 to the northwest. The toddlers, the Dederiyeh Infant and Skhul I, were placed with their heads to the south. Qafzeh 10, a child, rested with its head to the east. The child/adolescent, Qafzeh 11, was positioned with his head to the north as were the two youngest adults Qafzeh 9 [head north] and Amud I.[head northwest]. At this point the apparent association breaks down to some extent. Adult individuals deposited with their heads to the south were Shanidar IV [30 to 45 years], Shanidar VI [20 to 35 years], and possibly Skhul IV [40 to 50 years]. Only two individuals were placed with their heads to the west: Shanidar 1 [30 to 45 years] and Skhul V [30 to 40 years]. The highest frequency of orientation was along an east-west axis. Two elderly adults were placed in this orientation: Shanidar III [>40 years] and Skhul IX [50 years]. The balance of the adults disposed with their heads to the east were: Kebara 2 [male, 25 - 35 years], Tabun C1 [female, 30 years], Skhul VII [female, 35 to 40 years] and Qafzeh 8 [male, <50 years].

In general, orientations followed a similar pattern to body positions. Bodies rotated from north [infants] to south [toddlers] to east [young child] then repeated: north [older children or adolescents and young adults], south [adults], east [middle aged to elderly adults]. Skhul IV and Kebara 2 were the exceptions to this pattern. Skhul IV's axis of orientation was southeast to northwest; however, Defleur

(1993:129) stated his head was to the east looking toward the valley. Furthermore, the axis of alignment of the body was between 30 to 40 degrees south of east for the upper body and between 30 to 40 degrees north of west for the lower body. In this case, his head direction fits with the older individuals, to the east. The discussion of Kebara 2 in relation to body position also applied to orientation. The unique disposal orientation was the head to the west. This orientation was reserved for two conceivably middle-aged males, Shanidar I and Skhul 5. Both males were similar ages.

The dispersal pattern between the axis of alignment of the body and the body position is shown in the next chart. Some minimal correlations were noted. The east-west and west-east orientations were only right-sided and on back burials. The northwest-southeast and southeast to northwest axes were sided burials; either right or left side.

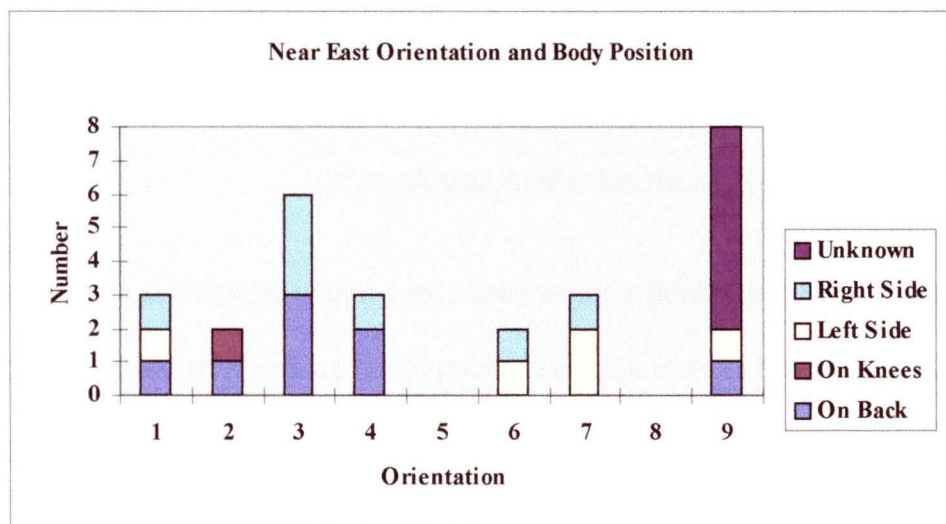


FIGURE 14.23

Legend: 1 - North-South
 2 - South-North
 3 - East-West
 4 - West-East
 5 - Northeast-Southwest
 6 - Northwest-Southeast
 7 - Southeast-Northwest
 8 - Southwest-Northeast
 9 - Unknown

TOTAL NUMBER OF INDIVIDUALS = 27

Body positions tended to demonstrate a rotational pattern based on age and orientations exhibited a similar kind of rotational pattern based on age. When the orientations were aligned to the rotational patterns for body positions and these were correlated with age, a fairly close correspondence emerged.

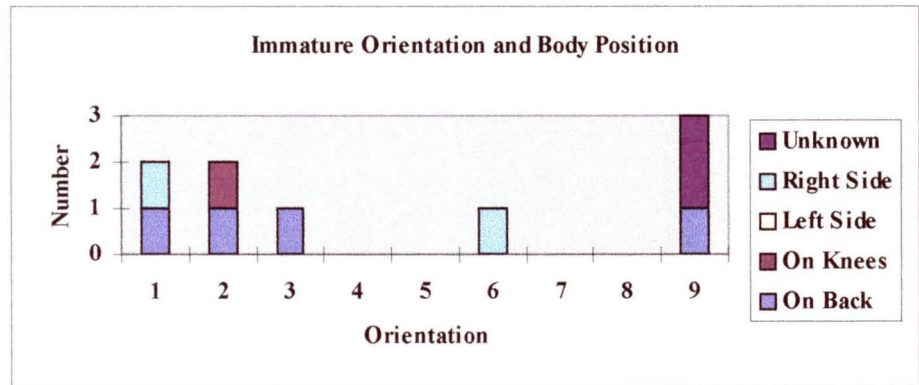


FIGURE 14.24

Legend: 1 - North-South
2 - South-North
3 - East-West
4 - West-East

5 - Northeast-Southwest
6 - Northwest-Southeast
7 - Southeast-Northwest
8 - Southwest-Northeast

9 - Unknown

TOTAL NUMBER OF INDIVIDUALS = 9

In accordance with the rotational patterns noted for the body positions, right sided disposals were infants. Both infants were buried with their heads in northerly positions. The “on back” positions were allocated to individuals between at least 2 years and 15 years. The “on knees” positions was unique; the individual was a toddler [Skhul I] with a perforation injury. Both toddlers were placed on a south to north axis of alignment. Regardless of the exact orientation of Qafzeh 15 [southwest to northeast or southeast to northwest], this child, aged about 5 years, was placed on an approximate

south to north alignment.⁴⁰ The slightly older child, Qafzeh 10, was placed on its back with its head to the east. The child/adolescent, Qafzeh 11, was situated on his back with his head north. His orientation was the same as the two youngest adults buried on their left sides: Qafzeh 9 [female, 18 - 20 years] and Amud I [25, years]. Two other adults

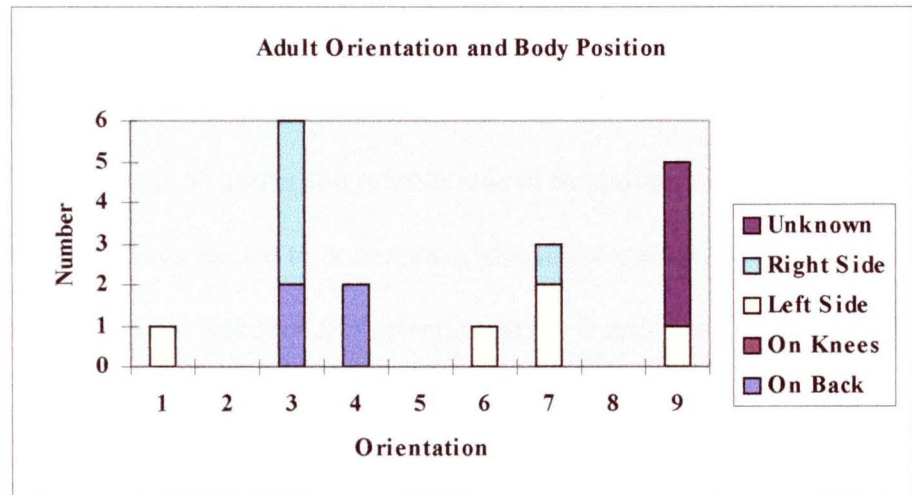


FIGURE 14.25

Legend: 1 - North-South 5 - Northeast-Southwest 9 - Unknown
 2 - South-North 6 - Northwest-Southeast
 3 - East-West 7 - Southeast-Northwest
 4 - West-East 8 - Southwest-Northeast

TOTAL NUMBER OF INDIVIDUALS = 18

were placed on their left sides with their heads south: Shanidar IV, a male, was 30 to 45 years old and Shanidar VI, a female, was 20 to 35 years. Therefore the orientation separated left-sided burials into young adults [approximate north to south orientations] and adults [southeast to northwest or approximate south to north orientations]. ‘On back’ adults with their heads to the east were Kebara 2 [male, 25 - 35 years] and Tabun C1 [30 years]. Two males were placed on their backs with their heads west: Shanidar I [30 - 45

⁴⁰ In the chart, the orientation of this young child was listed as unknown.

years] and Skhul V [30 - 40 years]. Four older individuals were buried on their right sides with their heads to the east. These disposals were: Shanidar III [male, >40 years], Skhul VII [female, 35 to 40 years], Qafzeh 8 [male, <50 years], and Skhul IX [50 years]. As stated previously, one male was interred on his right side in a southeast to northwest orientation, Skhul IV [40 - 50 years]. His head position was described as pointing east. The body orientation more closely approximated an east to west position than a south to north position. His position fit with the other elderly adults.

The disposal attitudes and orientations of immature individuals, young adults, and older individuals tended to correspond with life stages or social age. The correlation between disposal attitudes and orientations for females was strong. Each combination of attributes tended to fit with increasing age. The least compliance with the patterns was exhibited in adult to middle-aged adult male disposals. One explanation for the variations may be due to the inaccuracy of age estimations for archaic, poorly preserved skeletal populations. Another explanation for the variations in disposals for adult to middle-aged adult males may be allied to differences in social role, increasingly complex social *personae*, and issues of dominance and subordination.

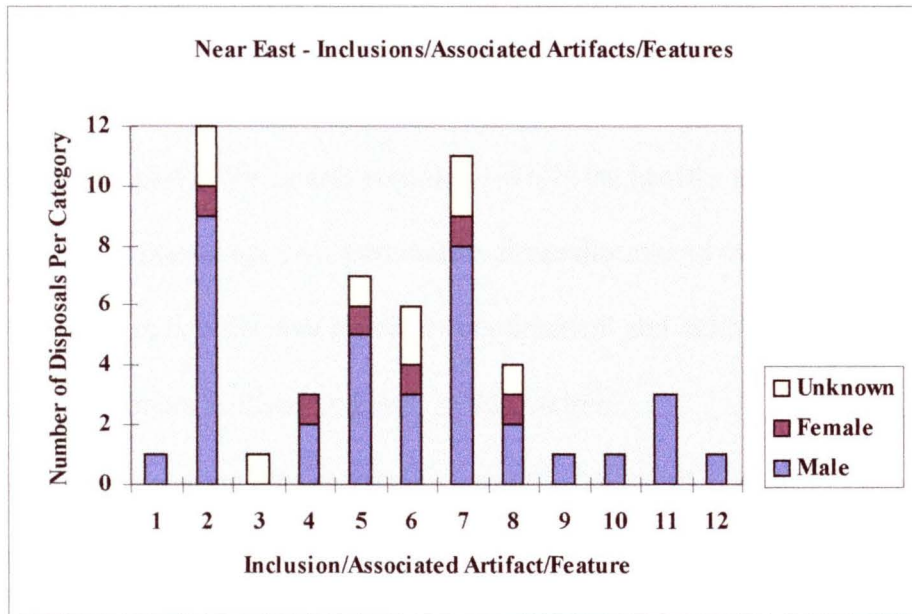
The evidence for the registration of age through a combination of the attributes of body positions and orientations was strong for nineteen of the twenty-seven articulated disposals. However, this combination was unknown for eight individuals, almost one-third of the articulated disposals. Absent information reduces the level of accuracy in the analysis. In addition, most individuals were positioned along the cardinal

direction axes. The alignment of five individuals in non-cardinal directions of orientation may be significant and may relate to socially prescribed distinctions.

INCLUSIONS/ASSOCIATED ARTIFACTS/ FEATURES

Between twenty and twenty-three of the articulated disposals in the Near East contained or associated with materials which conceivably allied with intentional offerings to the dead and/or mortuary ritual. The uncertainty in exact numbers was due to the Shanidar IV Complex which incorporated the remains of four individuals. The pollen samples from flowering plants may have been conjoined with one to four of these disposals. This complex was treated as one disposal and associated with the male, Shanidar IV, in the charts. The bovid cranium discovered with Skhul IX was included in the tabulation of inclusions/associated artifacts/features for the regional analysis. The disposals of Shanidar II and V were also included in these charts because bones and hearths were discovered in relation to the skeletal remains.

The chart [Figure 14.26] demonstrates the types of inclusions/associated artifacts/features recovered in the Near East as well as the sex distribution of the disposals containing or associating with these items. As the chart indicated, the most frequently recovered elements were bones and lithics. Hearths were associated with seven of the disposals. However, none of these hearths can be confirmed to be traits intentionally associated with disposal of the dead. They may represent palimpsests of domestic activity.

**FIGURE 14.26**

Legend: 1 - Antler
 2 - Bone
 3 - Carboniferous substance ?
 4 - Charcoal
 5 - Hearths
 6 - Limestone Blocks
 7 - Lithics
 8 - Ocher
 9 - Plant Pollens or Anthers
 10 - Shell
 11 - Stones
 12 - Teeth

TOTAL NUMBER OF DISPOSALS = 20 - 23

No distinctively female or male offerings were recognized. Males generally affiliated with a diverse range of materials. Male disposals often retained more than one type of inclusion. Many of the faunal inclusions were more complete elements and were generally from the skull of the animal such as the red deer or fallow deer antler with Qafzeh 11, mammal mandibles with Shanidar II and V, a wild boar mandible with Skhul V, and a large bovid cranium with Skhul IX. The infant, Amud 7, was also discovered with a relatively complete red deer maxilla on its pelvis.

Several male disposals were recovered in association with hearths:

Kebara 2; Shanidar I, II, III, and V. Kebara 2 was disposed on top of a hearth. The Shanidar VII infant was found 8 centimeters above a hearth. Fragmentary faunal bones were generally a part of the hearth complex. While the hearths may represent palimpsests of domestic activity, particularly those discovered in association with the burial; disposals in hearths may reflect a very practical and deliberate choice on the part of surviving members as discussed later in this section.

Limestone blocks were discovered on the feet of Qafzeh 8 and 11, and beside the feet and knees of Amud I. The Dederiyeh Infant also had a subrectangular limestone block above its head.

Three to five female disposals rendered associated material: Skhul I, Qafzeh 9, Tabun C1, and possibly Shanidar VI and VIII. Lithics were discovered near the skeleton of the Skhul 1 toddler and other was found in the fill matrix of Qafzeh 9 interment. The toddler was deposited in a unique fashion, on her knees, and she sustained a perforation injury to the right ear and glenoid cavity. Pollen samples were retrieved from the sediments surrounding the Shanidar IV complex. Tabun C1 was discovered on top of a hearth which contained burned bone fragments. The sparsity of material inclusions with female disposals may indicate some degree of sexual differentiation (Harrold 1980:199 - 200). However, until a more scientific method of assessment of the deliberate or fortuitous nature of potential inclusions is developed, burial architecture or inclusions/associated artifacts/features should not be used to indicate sexual distinctions..

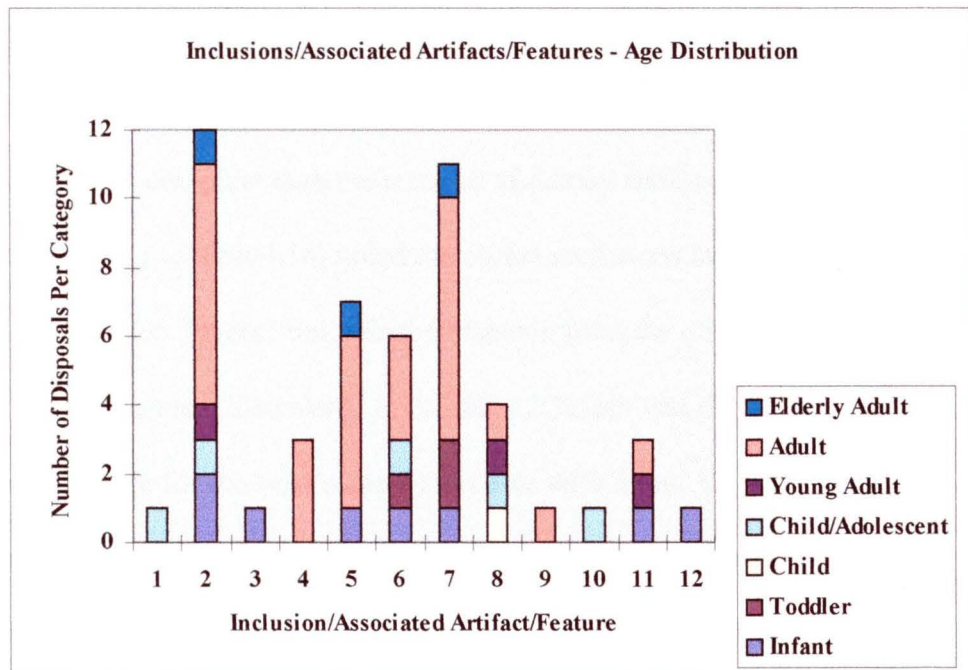


FIGURE 14.27

Legend:

1 - Antler	7 - Lithics
2 - Bone	8 - Ocher
3 - Carboniferous Substance?	9 - Plant Pollens or Anthers
4 - Charcoal	10 - Shell
5 - Hearths	11 - Stone
6 - Limestone Blocks	12 - Teeth

TOTAL NUMBER OF DISPOSALS = 20 - 23

No age related patterns emerged for the distribution of inclusion/associated artifacts/features in the Near East. Individuals of all ages were found in conjunction with material inclusions and associated features.

One of the difficulties with the acceptance of inclusions was the mundane or ‘everyday’ character of many of these incorporated materials. Mundane materials were likely the important elements for survival in Middle Palaeolithic times. Exotic elements were not generally a feature of Middle Palaeolithic sites, although some were

recovered in association with skeletal remains. The rhinoceros tooth with Kebara 1 and perhaps the ostrich egg shell fragment with Qafzeh 11 are two examples. Faunal remains which were not representative of the dominant fauna and the incorporation of elements which were more complete than the remains of dietary residue can be considered 'exotic'. Hovers *et al* (1994:56) noted the faunal inclusions interred with Qafzeh 11, Skhul V, and Amud 7 were "not indistinguishable from the other faunal residues in the sites". The only antlers discovered in the site of Qafzeh was the inclusion with the child. The same was true for the boar's hemi-mandible with Skhul V and the deer maxilla with Amud 7. Other examples of these types of faunal inclusions were the mammal mandibles from Shanidar II and V, and the bovid cranium from Skhul IX.

The faunal remains could be totemic markers of the individuals inhumed. They could also imply clan or some other type of kin-group membership. However, exotic materials should not be the only type of acceptable inclusions during this time frame particularly if surviving members were preparing the deceased for a journey to an afterlife. Elements which facilitated survival in the world of the living would be the most reasonable elements to send to the world of the dead with deceased members of the society.

The distribution of lithic materials within the disposal zone may have a more practical implication. In all the discussions of lithics and lithic analysis, no one has addressed the question of how lithics were transported to a site or how an individual hunter carried his tools on a hunt. Presumably, some form of carrier attached to the body in some way would have been needed. Perhaps an animal skin lashed together with

sinew and slung over the shoulder or tied around the waist would have been sufficient to carry extra scrapers or points and hafting materials. The Aruntas of Australia carried their tools in leather pouches strapped to their waists (Rolland 2000:personal communication). These carriers may have entered the deposits with the body of the deceased. The distributions of lithics around the skeleton of Amud I tends to suggest some form of carrier or tool kit entering the sediments with the body. In this sense their inclusion may or may not have been fortuitous.

Many of the skeletons were discovered with stones near or on the head, pelvis, or feet: Amud 1, the Dederiyeh Infant, Kebara 1, Qafzeh 8, and Qafzeh 11. These may be the result of natural processes. The recurrence of this type of material in the disposal units and the similarity of the positions of these items tends to support their deliberate placement in the deposits. One possible explanation may be to keep the body in the ground or to protect the corpse. Stones are frequently encountered near the head and sometimes the pelvis or feet of more recent disposals on the Northwest coast of Canada (personal experience).

Some individuals were placed in hearth beds: Kebara 1, Shanidar I, Shanidar VII, and Tabun C1. Others were discovered with hearths directly above the disposal or near the skeletons: Shanidar I, II, III, V, VII. Pit excavation in hearth beds, particularly in cold climates, would have been easier to accomplish. In a sense these are almost natural features, like niches, which facilitate disposal. The consistency of hearths in association with the disposals at Shanidar to some extent supports the interpretation of post-inhumation mortuary behavior on the part of the survivors.

The flower pollen and anther inclusions at Shanidar were probably introduced into the deposits by rodents. This possibility must be re-addressed when and if excavations at Shanidar are renewed. If they are deliberate, they may reflect the social role of any one or all of the adult individuals incorporated in the disposal or they may merely represent the concern of the living for the dead. Many of the pollens from the Shanidar IV complex have medicinal properties. Shanidar IV or one of the females, Shanidar VI or VIII may have been a healer or shaman.

Inclusions are always questioned because the deposition did not follow a specific 'symbolic' pattern in relation to the skeleton and because these same elements were part of the sediments of the site in general. One possible method of testing the potential deliberate nature of the inclusion of materials would be to check their distribution in the site via a stratified random sampling of other units in the same general locale and same level as the interment unit. The percentages of various materials recovered in these units could be compared to those of the disposal unit. If the patterns were similar, then the materials were probably not deliberate inclusions. If the distribution patterns differed then the materials were likely offerings to the dead.

SKELETAL PATTERNS

Age appeared to be the principal factor marked by body orientation and position for the articulated disposals in the Near East. In order to address the issue of skeletal patterns for disarticulated remains in a regional perspective, these remains were segregated in accordance with the age categories indicated by body position and

orientation. In general, the articulated population separated into the following categories: infant [<12 months], toddler [1 through 4 to 5 years], child [5 or 6 years to 10 years], adolescent [8 to 10 years through to at least 15 years], young adult [15 through 25 years], adult/middle-aged adult [25 to 40 years], and elderly adult [>40 years].

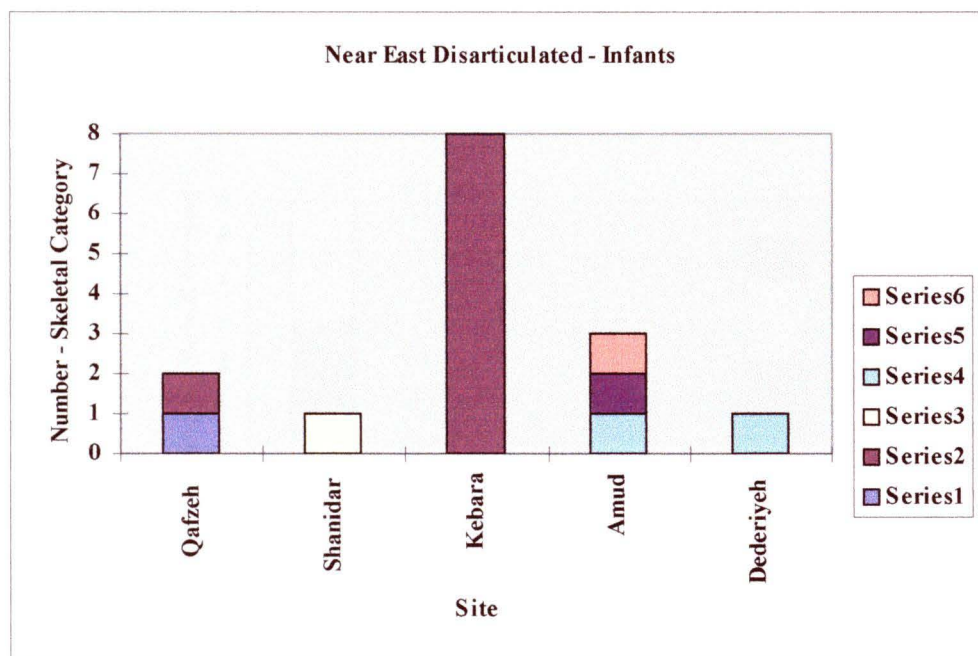


FIGURE 14.28

Legend: Series 1 - Cranium Series 4 - Humerus
 Series 2 - Teeth Series 5 - Radius
 Series 3 - Vertebrae Series 6 - Tibia

Total Number of Infants Qafzeh = 2

Total Number of Infants Shanidar = 1

Total Number of Infants Kebara = 7

Total Number of Infants Amud = 1

Total Number of Infants Dederiyeh = 1

TOTAL NUMBER OF INFANTS = 12

Limited similarities existed for some of the infants in the Near East such as the teeth from Qafzeh and Kebara and the humeri for Amud and Dederiyeh. A strong case may be offered for the original presence of the cranium and/or mandible for the

disarticulated infants at Kebara because some of the teeth were tooth buds or germs.

Kebara 4 was actually a series of maxillary and mandibular teeth. Kebara 25 was a series of maxillary tooth germs. Kebara 8, 13, 15, and 26 were represented by maxillary teeth or germs and Kebara 29 was marked by a mandibular tooth. However, no real regional pattern emerged.

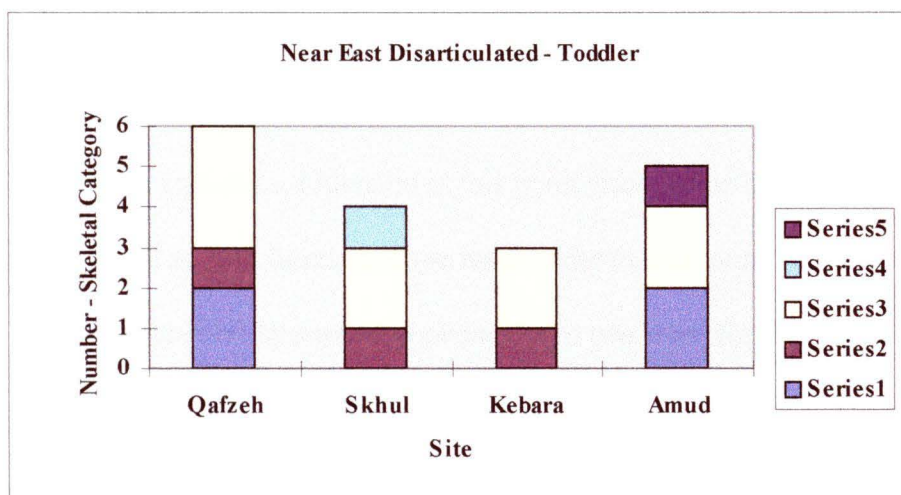


FIGURE 14.29

Legend: Series 1 - Cranium
 Series 2 - Mandible
 Series 3 - Teeth
 Series 4 - Humerus
 Series 5 - Femur

Total Number of Toddlers Qafzeh = 3
 Total Number of Toddlers Skhul = 1
 Total Number of Toddlers Kebara = 3
 Total Number of Toddlers Amud = 3
TOTAL NUMBER OF TODDLERS = 10

Toddler remains exhibited a similar type of distribution as infants. The elements which designated Qafzeh 4 [now Qafzeh 4/22, age 5 years, and Qafzeh 4a/21, age 3 to 4 years] were incorporated in the chart as toddlers. Qafzeh and Amud demonstrated similarities in the retention of cranial fragments and teeth. Kebara and

Skhul were also comparable in the representation of mandibles and teeth. Skhul and Amud resembled each other via the incorporation of appendicular remains. At Amud, the infants were all 'near the wall' including the infant burial; whereas only one toddler was recovered from the 'near wall' region and it was represented by a femur. The other two toddlers were cranial remains. The reason for differences in the skeletal representations between the Amud toddlers was uncertain unless the near wall region marked a female and/or infant disposal zone. This suggestion cannot be elucidated at the present time as no female remains were identified at Amud. Whether or not these similarities are significant cannot be addressed at this point either. The concordance of the patterns must be tested against future discoveries in order to determine relevance.

Disarticulated children were recovered from two sites, Kebara and Amud. They were represented by a single skeletal category, teeth. Only three disarticulated remains were adolescents who were also marked by teeth.

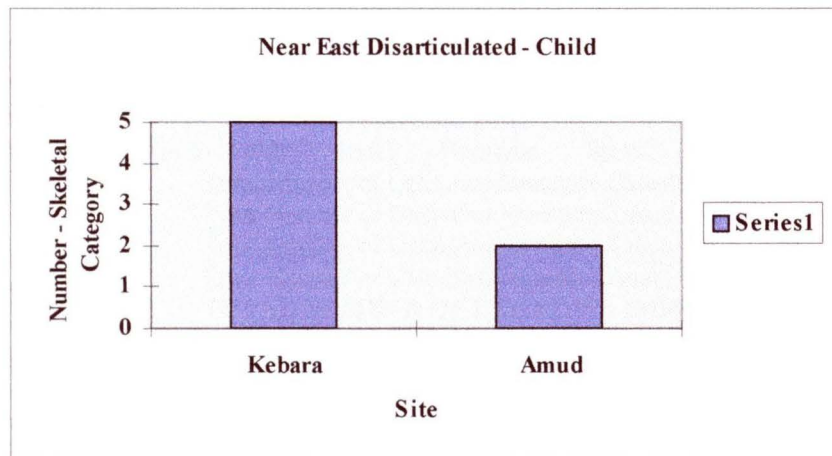


FIGURE 14.30

Legend: Series 1 - Teeth

Total Number of Children Kebara = 5

Total Number of Children Amud = 2

TOTAL NUMBER OF CHILDREN = 7

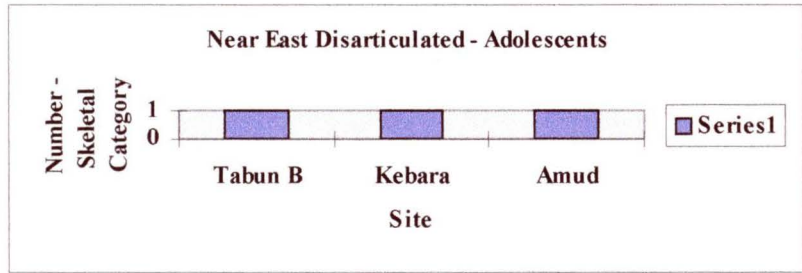


FIGURE 14.31

Legend: Series 1 - Teeth

Total Number of Adolescents Tabun B = 1

Total Number of Adolescents Kebara = 1

Total Number of Adolescents Amud = 1

TOTAL NUMBER OF ADOLESCENTS = 3

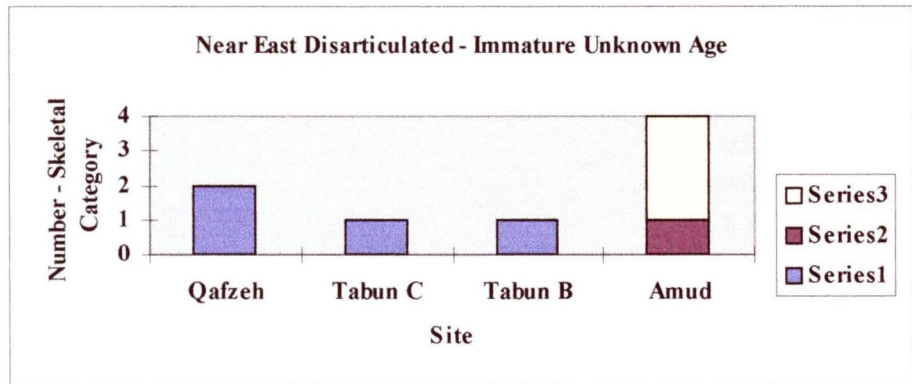


FIGURE 14.32

Legend: Series 1 - Teeth Series 2 - Humerus Series 3 - Radius

Total Number of Unknown Immature Qafzeh = 2

Total Number of Unknown Immature Tabun C = 1

Total Number of Unknown Immature Tabun B = 1

Total Number of Unknown Immature Amud = 4

TOTAL NUMBER OF UNKNOWN IMMATURE = 8

Eight immature specimens were not given specific age ranges. If skull [cranium, mandible, and teeth] and appendicular elements marked infants and toddlers, then some of these individuals may be given age allocations. The immature individuals

represented by appendicular elements may be infants or toddlers. Teeth were more problematic. Isolated teeth designated individuals in all age categories including adults.

The skeletal distribution for disarticulated adults in the Near East is illustrated on the chart below.

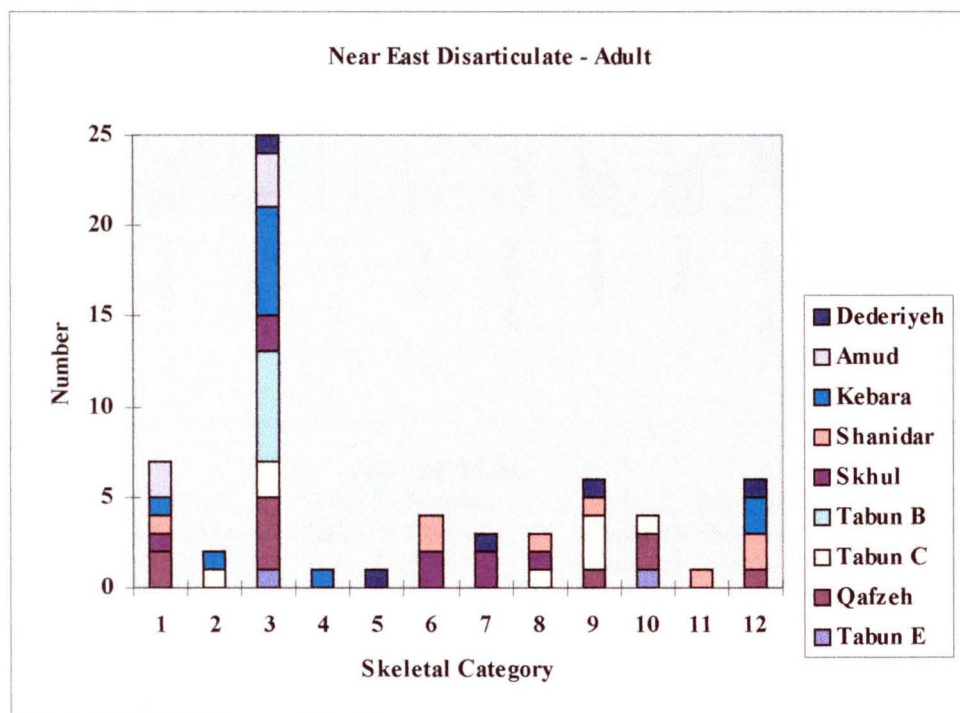


FIGURE 14.33

Legend: 1 - Cranium
2 - Mandible
3 - Teeth
4 - Clavicle

5 - Scapula
6 - Humerus
7 - Ulna
8 - Radius

9 - Hand Bones
10 - Femur
11 - Fibula
12 - Foot Bones

Total Number of Adults Tabun E = 2

Total Number of Adults Qafzeh = 4

Total Number of Adults Tabun C = 5 to 7

Total Number of Adults Tabun B = 5

Total Number of Adults Skhul = 1

Total Number of Adults Shanidar = 1

Total Number of Adults Kebara = 9

Total Number of Adults Amud = 4

Total Number of Adults Dederiyeh = 5

TOTAL NUMBER OF ADULTS = 36 to 38

The distribution of disarticulated adults by site in given in the next chart.

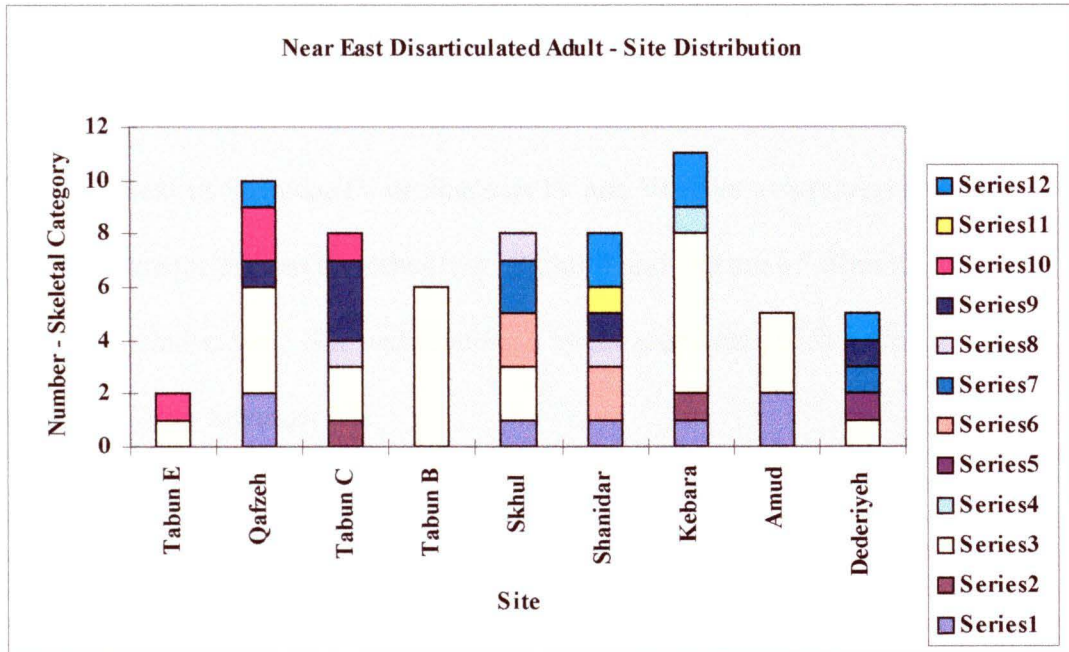


FIGURE 14.34

Legend: Series 1 - Cranium Series 5 - Scapula Series 9 - Hand Bones
 Series 2 - Mandible Series 6 - Humerus Series 10 - Femur
 Series 3 - Teeth Series 7 - Ulna Series 11 - Fibula
 Series 4 - Clavicle Series 8 - Radius Series 12 - Foot Bones

Total Number of Adults Tabun E = 2
 Total Number of Adults Qafzeh = 4
 Total Number of Adults Tabun C = 5 to 7
 Total Number of Adults Tabun B = 5
 Total Number of Adults Skhul = 1
 Total Number of Adults Shanidar = 1
 Total Number of Adults Kebara = 9
 Total Number of Adults Amud = 4
 Total Number of Adults Dederiyeh = 5
TOTAL NUMBER OF ADULTS = 36 to 38

One consistency for all of the sites yielding adult disarticulated remains was the presence of elements from the skull: cranium, mandible, and/or teeth. Not all disarticulated adults retained these elements; but, their perpetual presence in the same disposal areas as the articulated remains was noteworthy. The import of this pattern

cannot be elucidated since too much information was unobtainable, such as specific ages of the specimens and sexual determinations

Three of the disarticulated adults retained more than 3 skeletal categories. Shanidar VIII may actually have been a more complete disposal which was disturbed by the interment of Shanidar IV or Shanidar IV and VI. She was represented by more skeletal categories than the other two: Skhul II and Qafzeh 6. Shanidar VIII was also a composite individual. She was identified by the elements which were left over from Shanidar IV or Shanidar VI.

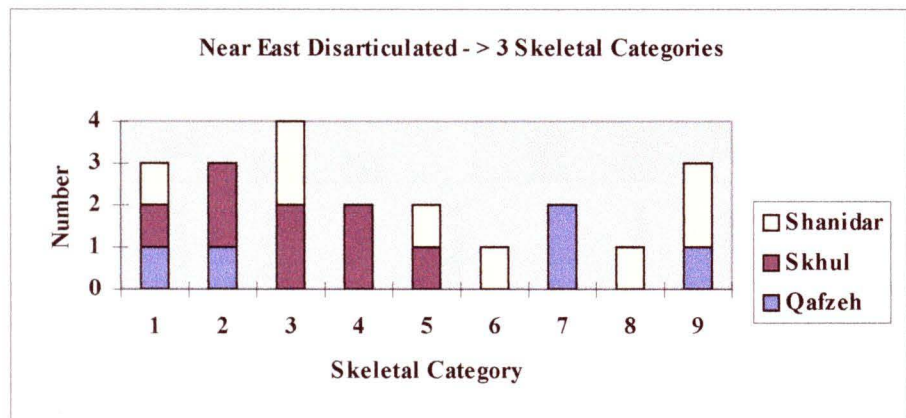


FIGURE 14.35

Legend: 1 - Cranium 4 - Ulna 7 - Femur
 2 - Teeth 5 - Radius 8 - Fibula
 3 - Humerus 6 - Hand Bones 9 - Foot Bones

Total Number of Individuals Qafzeh = 1

Total Number of Individuals Skhul = 1

Total Number of Individuals Shanidar = 1

TOTAL NUMBER OF INDIVIDUALS = 3

The Skhul specimen was Skhul II, a female aged between 30 and 40 years. The Qafzeh fossil was Qafzeh 6, a male aged between 20 and 40 years. Both individuals were recovered as a mass of bones in no particular anatomical order. Both individuals

shared the elements of cranium and teeth. The female retained only upper limb elements and the male retained only lower limb elements. To suggest that upper limbs marked adult females and lower limbs adult males would be premature, even for the two sites designated, Qafzeh and Skhul. This possibility should be tested against new discoveries in the Near East.

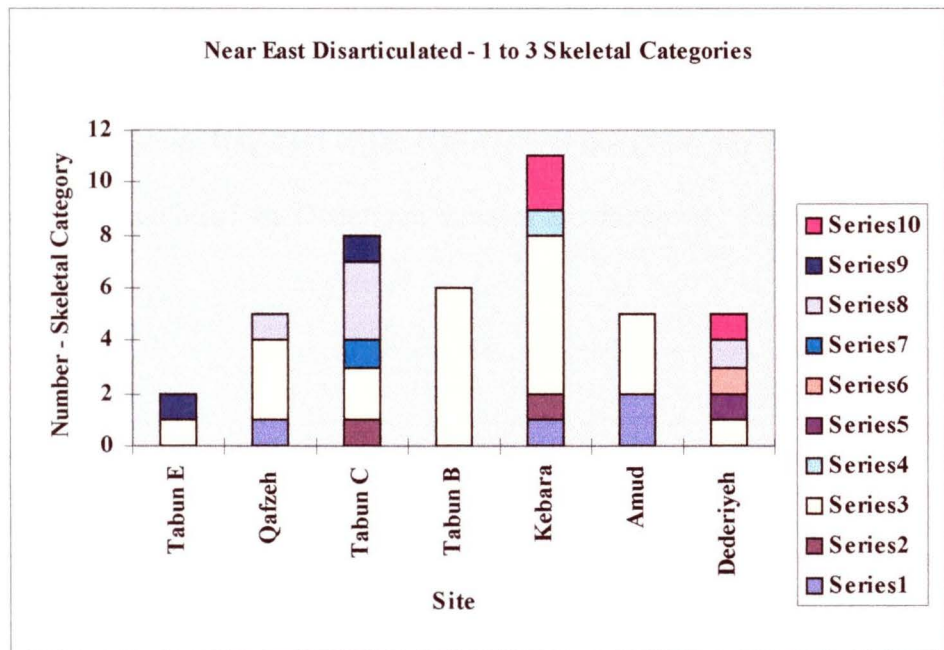


FIGURE 14.36

Legend: Series 1 - Cranium
 Series 2 - Mandible
 Series 3 - Teeth
 Series 4 - Clavicle
 Series 5 - Scapula
 Series 6 - Ulna
 Series 7 - Radius
 Series 8 - Hand Bones
 Series 9 - Femur
 Series 10 - Foot Bones

Total Number Individuals Tabun E = 2
 Total Number Individuals Qafzeh = 3
 Total Number Individuals Tabun C = 5 to 7
 Total Number Individual Tabun B = 5
 Total Number Individuals Kebara = 9
 Total Number Individuals Amud = 4
 Total Number Individuals Dederiyeh = 5
TOTAL NUMBER OF INDIVIDUALS = 33 to 35

The balance of the disarticulated remains exhibited some similarities in skeletal elements; but no distinct patterns were noted. The fragmentary remains from Skhul were not included in the chart because the fossils were not given any age allocations. Broad similarities were witnessed for Qafzeh, Kebara, and Amud in cranial and dentition representations. Tabun B and Kebara were remarkably similar in the high frequencies of isolated teeth. Many of the osseous elements from Kebara may associate as one individual [Kebara 6, 9, 11, 17, and perhaps 10]. Kebara 17 is not marked in the previous chart as the acromial fragment of the clavicle was not given any form of age designation. The provenience of the Dederiyeh remains are unknown. The variety of elements may also associate.

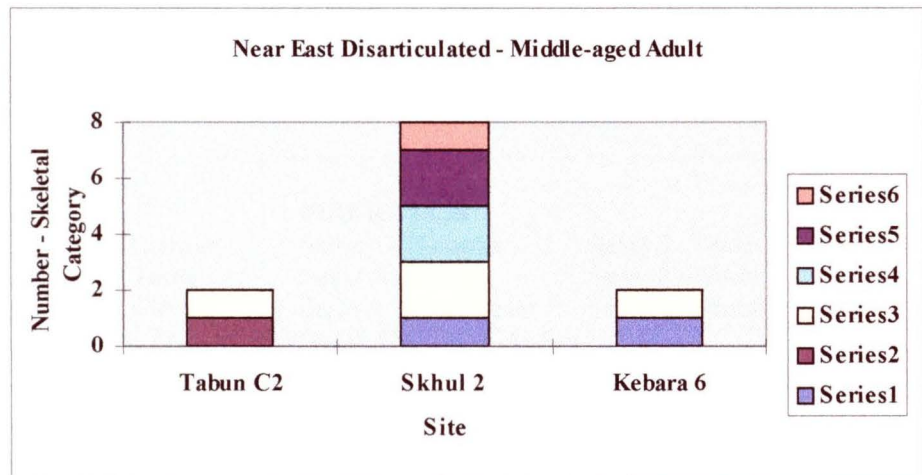


FIGURE 14.37

Legend: Series 1 - Cranium
 Series 2 - Mandible
 Series 3 - Teeth
 Series 4 - Humerus
 Series 5 - Ulna
 Series 6 - Radius
TOTAL NUMBER OF INDIVIDUALS = 3

Ten of the disarticulated adults were given age estimations. Three disarticulated adults were approaching middle age. Tabun C2 [male, 30 - 35 years],

Skhul II [female, 30 - 40 years], and Kebara 6 [older than Kebara 2 who was 25 - 35 years]. Some portion of the skull [cranium, mandible, and teeth] was recovered for all three.

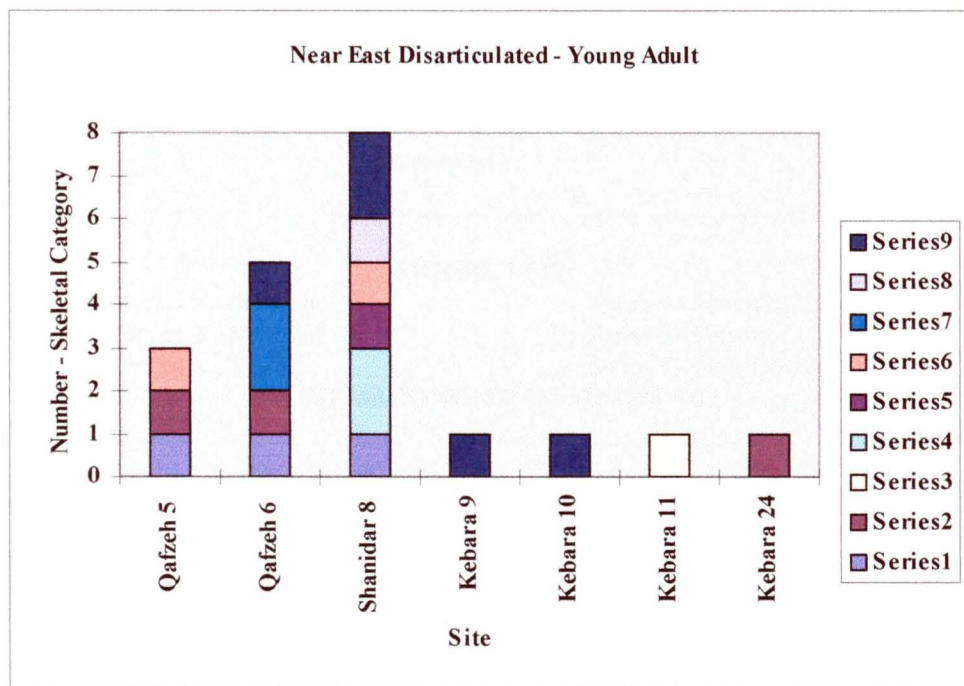


FIGURE 14.38

Legend: Series 1 - Cranium Series 4 - Humerus Series 7 - Femur
 Series 2 - Teeth Series 5 - Radius Series 8 - Fibula
 Series 3 - Clavicle Series 6 - Hand Bones Series 9 - Foot Bones

TOTAL NUMBER OF INDIVIDUALS = 7

Six to seven of the aged individuals were young adults: Qafzeh 5 [20 - 50 years], Shanidar VIII [young adult female], Kebara 9 [female, 15 - 22 years], Kebara 10 [female, 15 - 22 years], Kebara 11 [younger than Kebara 2 who was 25 - 35 years], Kebara 11 [young adult], and possibly Qafzeh 6 [20 - 40 years]. No particular patterns were indicated when these individuals were examined for skeletal category distribution.

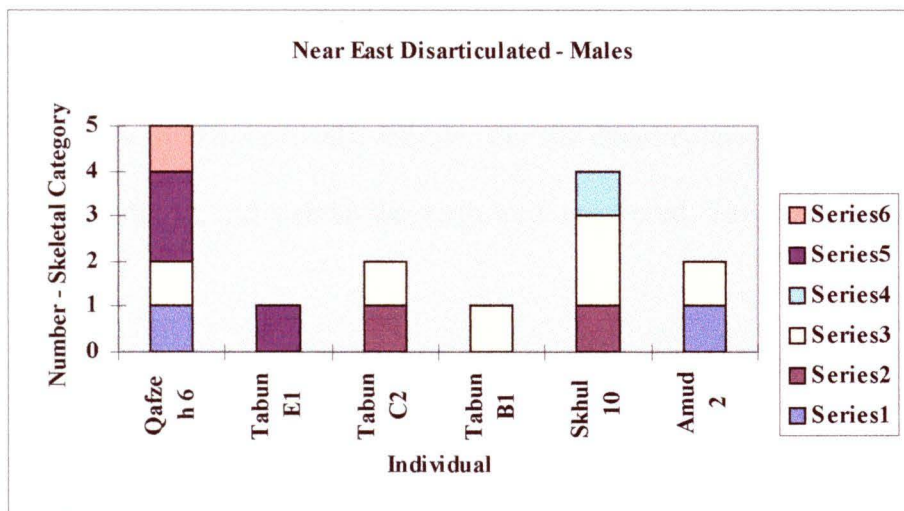


FIGURE 14.39

Legend: Series 1 - Cranium
 Series 2 - Mandible
 Series 3 - Teeth
 Series 4 - Humerus
 Series 5 - Femur
 Series 6 - Foot Bones

TOTAL NUMBER OF MALES = 6

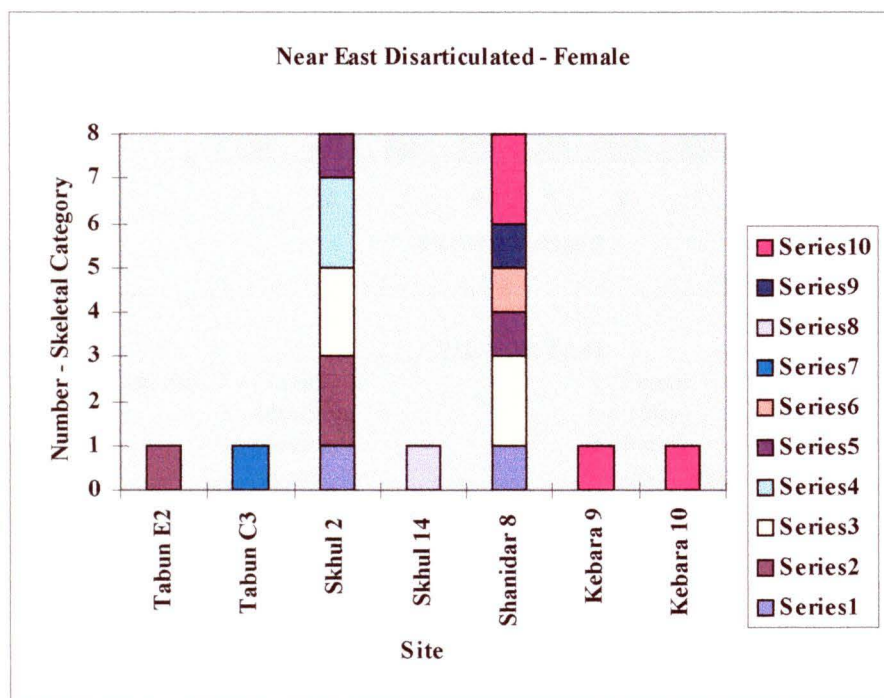


FIGURE 14.40

Legend: Series 1 - Cranium
 Series 2 - Teeth
 Series 3 - Humerus
 Series 4 - Ulna
 Series 5 - Radius
 Series 6 - Hand Bones
 Series 7 - Femur
 Series 8 - Tibia
 Series 9 - Fibula
 Series 10 - Foot Bones

TOTAL NUMBER OF FEMALES = 7

Six of the disarticulated immature and adult remains were diagnostically male and seven were diagnostically female. Female disarticulated remains did not incorporate mandibles, but mandibular teeth were recovered. However, no general pattern emerged

Kebara 17, Kebara 20, and Skhul 11 through 26 were not aged in any fashion. Their skeletal distribution is exhibited in the next chart. Most of the Skhul fossils were extremely fragmentary, incomplete appendicular elements.

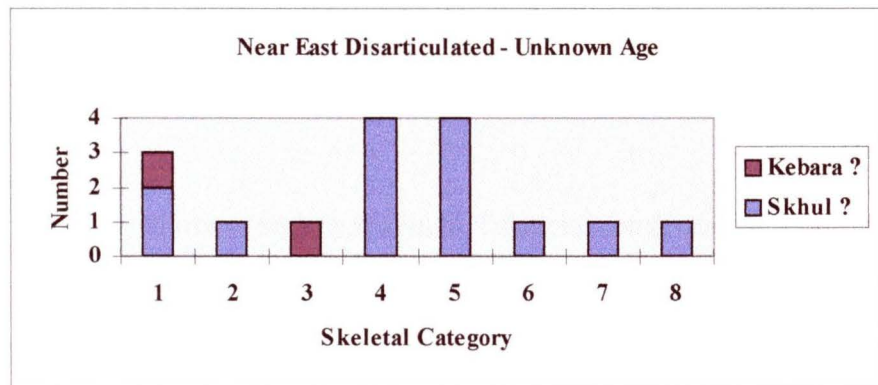


FIGURE 14.41

Legend: 1 - Cranium
2 - Mandible
3 - Clavicle
4 - Humerus
5 - Femur
6 - Tibia
7 - Patella
8 - Foot Bones

Total Number of Individuals Skhul = 16

Total Number of Individuals Kebara = 2

TOTAL NUMBER OF INDIVIDUALS = 18

No age distinctions were noted in the adult category of disarticulated elements. Isolated teeth were identified with all age categories for both immature and adult individuals. The individuals of unknown age cannot be incorporated into any age category based on the present state of the information. The sex distribution chart

indicated that no identified females retained the mandible. The Kebara mandibular fragment may be male. The fragment was recovered in a more central location like the other two identified males, Kebara 1 and 2. This allocation requires further investigation.

Although similarities existed between the skeletal representations in some of the sites, no definitive regional patterns were recognized. In this regard, the skeletal patterns tended to be site specific and more closely correlated to social group differences. Regardless of the lack of succinct patterning, certain aspects of the skeletal distributions were important.

First, fossil hominids were found in a variety of disposal formats:

- 1) more complete articulated skeletal remains consistent with primary interments;
- 2) partial skeletons with some degree of articulation or anatomical association;
- 3) masses of bone with no anatomical association or articulation;
- 4) fragmentary, disarticulated fossils generally comprised of one to three skeletal categories.

With the possible exception of the Shanidar IV complex and Skhul IX, potential inclusions were only recovered from more complete, articulated disposals.

A second relevant feature was noted by a general increase over time in the numbers of disarticulated remains compared to articulated skeletons. Qafzeh yielded seven articulated disposals and twelve disarticulated remains. Tabun C had one burial and at least six fragmentary specimens. Skhul had eight articulated or anatomically

associated disposals and eighteen fragmentary ones. Kebara held 2 primary disposals and twenty-seven disarticulated, extremely fragmentary individuals. Most of the fragmentary remains were isolated teeth. Amud had 3 articulated individuals and fifteen fragmentary disposals. The situation at Shanidar was uncertain as only a small segment of the cave was excavated.

For the five sites analyzed in detail, some evidence for curation or mortuary processing of skeletal remains was evident. At Kebara, the removal of the cranium from Kebara 2 and the high incidence of teeth denoting most of the other remains raised speculations of post-mortem processing. The missing lower body of Qafzeh 15, the unaccounted for feet of Qafzeh 10, and the likely secondary disposal of Qafzeh 6 indicated the potential for curation at Qafzeh. The absence of Shanidar 3's cranium and possible secondary interment of at least Shanidar VIII and possibly Shanidar VI and IX insinuated secondary treatment after primary disposal. For Skhul III, Skhul VI, and Skhul VIII, the only elements in articulation or association were lower limbs. Skhul II was probably a secondary interment. Skhul IX may have been a secondary disposal as well. The fragmentary elements recovered at Skhul were mainly long bones and cranial fragments. These were the same types of elements missing from many of the disposals. The non-random pattern of skeletal elements recovered and their locations in the disposal zone of the cave indicated curation at Amud. The remains from all of these sites should be re-examined for evidence of cut marks, calcination, carnivore damage, and other taphonomic indicators.

LOCATIONS IN SITES

The populations of Amud, Kebara, Qafzeh, and Skhul disposed of their dead in a particular region of the cave, terrace, or rock shelter. At Amud, the disposals were located along the north wall in the northwest quadrant of the site. For Kebara, the main cluster of hominid remains was located along the north or northeast wall of the cave, especially in the earlier occupation levels. The Qafzeh remains were located in the northeast part of the terrace [or southeast portion of the cave] in the region described as the vestibule. At Skhul, the disposals were spread across the front of the terrace, the northernmost portion of the site. At Dederiyeh 2, the infant burial was in the northeast corner of the cave. The cave of Tabun faces northwest. The female, Tabun C1, burial was located along the west wall just outside the cave mouth, the northwest part of the cave or the southwest portion of the talus. The situation of the Tabun C1 burial at the cave mouth also resembled the location of the disposals from Qafzeh in the vestibule at the cave entry. Tabun C3 and E2, both females, were located on the talus and just outside the cave mouth respectively. Again, this was the north or northwest portion of the site. The disposals inside Tabun cave were difficult to accommodate as most were only ascribed to the interior of the cave. Too little of Shanidar has been excavated to ascertain what area of the cave represented the preferred disposal zone or even if a preferred zone existed. Perhaps, the choice of the location of a burial or disposal zone in the majority of the sites was dictated by the cardinal direction north. Again, disposals at Qafzeh may or may not have agreed with this northern placement of the dead.

Sex and age distinctions were differentially registered in each of the sites.

At Qafzeh, locational patterns in the vestibule, either near the terrace or near the cave, marked age distinctions. At Skhul, the locational patterns of peripheral or more centrally positioned minimally indicated sex distinctions. Immature individuals were also closer to the rock overhang of the shelter which marked age differences between immature individuals and adults. For Shanidar, no locational patterns could be interpreted. In Kebara the locational patterns, either near the wall or more central, seemed to imply some sex distinction. Identified females were found near the wall and identified males were discovered in more central locations. At Amud, no females were identified. The significance of the 'near wall' and 'away from the wall' disposal locations may be similar to Kebara as the only sexually diagnostic remains from Amud were male and they were recovered in 'away from the wall' positions. This speculation cannot be resolved at this point.

SUMMARY OF PATTERNS

In summary, the patterns exhibited in the disposal of the dead for the Middle Palaeolithic populations inhabiting the Near East were complex. Localized burial zones, location within the burial zone, orientation of the body and position of the body may have symbolically represented the age and possibly sex of the individuals.

A combination of body position and orientation denoted the age of the deceased in a fairly precise fashion. These age distinctions were likely allied to socially conceived life stages which also affiliated to some extent with physical changes in the

body. Generally speaking, infancy followed from birth to around 12 months to 2 years of age. A toddler phase was suggested by the differences in orientation and body position between individuals in the infant and toddler age categories. Infants were placed on the right side and orientated along an approximate north-south axis with the head to the north. Toddlers received a south-north orientation. In all likelihood, the standard body position for toddlers was on the back. The infant stage probably correlated to the time from birth to either the eruption of the first teeth or to first steps in walking. Practically speaking, the ability to walk would mark an important transition for immature individuals from hunter/gatherer populations. Ambulatory capabilities would relieve the burden placed on parents or caregivers in highly mobile societies. The toddler phase likely ended at the time of weaning which has been noted for some ethnographic hunter/gatherer populations at around 3 to 4 years of age. Also, the toddler phase would have marked the stage of gradual development of motor skills. The child phase began around 5 to 6 years and extended to puberty around 8 to 12 years. The adolescent phase probably ranged from 8 to 10 years to around 15 years. For adults, the age distinctions noted by burial patterns were young adult [15 to 25 years]; adult to middle-aged adult [25 to 40 years], and elderly adult [>40 years].

The disposal population from Qafzeh represented a fairly broad demographic range from infants up to elderly adults. Skhul's deceased were generally older, mainly middle-aged to elderly adults and three immature individuals, two toddlers and a child to adolescent [Skhul VIII]. Females were identified in both sites: 2 or possibly 3 adult females for Qafzeh; and 2 adult females plus one female toddler for

Skhul. The Tabun population, in all layers, represented mainly adults and a few children. The Shanidar adult burial population's demography was broader and represented all age categories of adults. Immature individuals were infants. The disposal populations from Kebara and Amud appeared to be younger, although the fragmentary nature of the majority of the remains and the inability to accurately age and sex these remains interfered with the credence of this assessment. Females in Kebara, when identified, were fragmentary. Amud contributed no identified females and Kebara yielded 2 young adult females. The majority of the fragmentary remains from Kebara were infants or toddlers.

The Qafzeh people emphasized the burials of adults and immature individuals in the age categories of child and adolescent. The Skhul population also stressed adult burials, particularly males, with one almost complete toddler [a female], a fragmentary toddler [male], and a fragmentary, anatomically associated child to adolescent [male]. One female at Skhul was definitely buried while the second may have been a secondary disposal. Tabun yielded one burial, a female. The Shanidar burial population recovered to date indicated mainly adult male burials and at least one infant interment. The females at Shanidar may have been secondary disposals, although Shanidar VI was given a potential position and the orientation was extrapolated from the Shanidar IV burial description. The Amud and Kebara burials were either adult males or infants. One infant, Kebara 1, was also male. The pattern for Amud may emulate Kebara.

In general the patterns of disposal in the early occupation of Qafzeh appeared more egalitarian in social structure than the later sites, although some limited evidence for same sex distinctions were indicated. Males and females appeared to be fairly equally represented in the disposal population of Qafzeh. The spatial allocations of Skhul indicated minimal separation of male and female regions for disposal and some marked indications of age distinctions depicted by burial positions and orientations. Skhul appeared to mark a transition to a more pronounced differentiation based on the two criteria of sex and age. Sex distinctions were not specifically noted by burial position; but, the numbers of articulated female disposals compared to articulated male disposals recommended some level of social differentiation based on sex. At Kebara, the evidence based on four individuals who were diagnostically male or female, suggested females may have been disposed in the near wall region of the cave and males were deposited in more central locations. This may agree with sexual differentiation.

The variety of positions for adult to middle aged adults, the incorporation of males as secondary disposals, and/or the inclusion of fragmentary diagnostically male disposals in Qafzeh, Skhul, Shanidar, and Amud suggested some same sex distinctions which likely allied to issues of dominance and subordination. Qafzeh, Skhul, and possibly Shanidar also suggested some level of dominance and subordination for females

Most primate groups such as baboons, gorillas, and chimpanzees, are hierarchically organized. Both sexes have dominant and subordinate individuals. Dominance for chimpanzees is complex (Jolly, Allison 1985:265). The behavior and social organization of hominids should be expected to be at least as complicated as the

comportment and social arrangement of other primates. In human societies, issues of dominance and subordination correspond to the number of social roles recognized, the complexity of the social *personae*, and socially prescribed status distinctions.

The patterns for Skhul, Amud, and Kebara may also recommend ascribed status for some infants and toddlers and possibly achieved or age related status for adults. The primary interment of one toddler and the presence of the fragmentary remains of another toddler as well as the absence of children in fairly complete articulated burial contexts at Skhul, Kebara, and Amud tends to suggest that after early childhood [infant and toddler phases] individuals earned their position within the social structure. Skhul VIII was probably an adolescent based on his age of 8 to 10 years and the similarity of his disposal condition to those of two adult males, Skhul III and VI, indicated the status of the three males was probably similar and subordinate to the completely articulated male disposals such as Skhul IV and V. The burial of the toddler at Dederiyeh 2 may also fit with ascribed status like Kebara and Amud.

Qafzeh's pattern of disposal for immature individuals tended to suggest that infants and toddlers may not have been considered full members of the social unit. For Qafzeh, as the age of immature individuals increased, the number of skeletal elements recovered also increased. In general, ascribed status was not suggested by the Qafzeh disposal population. Achieved status may be noted for adults based on the articulated male and female disposals and the disarticulated male, Qafzeh 6, one sexually undiagnostic articulated individual [Qafzeh 7] and three other sexually undiagnostic disarticulated adults: Qafzeh 5, Qafzeh 16, and Qafzeh 17.

One intriguing pattern related to age was the virtual absence of adolescent remains. One tooth from Amud, one tooth from Kebara, one individual from Qafzeh [Qafzeh 11], and possibly one individual from Skhul [Skhul VIII]. Either survival for the adolescent age group was greater or these individuals did not generally share in the occupation of or disposal in the sites. The Masai of Kenya send their adolescent and young adult males out to herd cattle and raid. The exclusion of these males in this age-grade society reduces internal social conflict (Tunnell 1993:personal communication; personal experience).

Over time, the site patterns implied increasing complexity in social structure and emerging social differentiation. The evidence for potential cranial deformation from Shanidar also supported this assessment. [See Chapter 12, pages 314, 317 - 318, and 337].

Several of the articulated disposals in the Near East contained individuals who were disabled or had suffered some form of injury. Qafzeh 8 had a crushed talus and digitigrade gait. Qafzeh 11 received a cranial injury. His disposal contained several potential inclusions. The toddler, Skhul I, had received a perforation injury to the right ear and glenoid cavity. Skhul IX bore the evidence of a traumatic wound which traversed the left femur and penetrated the pelvis. He also had a cranial fracture. Shanidar I had received an injury to the frontal bone of the cranium and the left side of the orbit of the eye. He may also have had his left lower arm amputated. Shanidar III had an ankle injury which showed evidence of degenerative changes and a perforation injury to the 9th left rib which may have caused a pneumo-thorax. Kebara 2 had advanced osteoarthritis

of C2-C3, sciatica of S1, and a possible recurrent pleural irritation. Even Shanidar IV carried the scar of a middle rib fracture. Two hominids, Shanidar II and V, were discovered in traumatic positions which suggested they were killed in a cave collapse. Mammal mandibles and hearths were discovered in association with the skeletons. The vertebral column of Shanidar II was wrapped around his head. Shanidar V was on his knees, his trunk bent backwards with his head at the same level as his pelvis.

Curation appeared to be part of the mortuary practices of all the groups. The elements curated were frequently specific on a per site basis and the elements selected may also have designated age, sex, or both.

Issues of taphonomy must be clarified in all sites. Diagenesis and other taphonomic processes such as carnivore gnawing or trampling could have caused the disappearance of certain elements in the disposals. Also, the isolated elements must be compared to the more complete remains and other isolated elements to ascertain whether any of the skeletal materials associated. The fragmentary remains from Kebara, in particular, require reassessment of association. Elements recovered in close proximity, at the same depths below datum, and of a similar age at death are likely to associate. Normal procedures of sorting bone are by size, color, and age, when available. Bone density studies which are used in circumstances of mass disaster in modern forensic cases would probably not be beneficial in this kind of analysis. Bone density measures “the density of the cortex of the long bones as well as the state of mineralization or demineralization” (Krogman and Iscan 1986:5-6). The bones from the sites in the Near East were differentially mineralized and some were so fragile that handling the remains

destroyed the osseous material. DNA analysis, if any of this organic material remained in the bone matrix, would be more effective in the determinations of skeletal associations. Trace element ratios might also be useful in sorting out which remains belonged to the same individual (Fulton, Brent A.; Clifton E. Meloan, and Michael Finnegan 1986:1461). Trace element analysis is a complex and time consuming process. One major problem with this process is the bone must be drilled to obtain a test sample. A second complication with the process arises from the ionic properties of many of the trace elements. As water in sites interferes with the precision of dating methods, long term exposure to moisture affects trace elements retained in bone. The trace elements may no longer represent normal bone elements, but precipitates carried in with the ground water. Soil also leaches elements from the bone. However, bones in the same general location were likely to be subjected to the same types of influences.

The increase in the numbers of fragmentary remains compared to articulated ones requires some discussion. General systems theory, in particular the deviation amplification or feedback model, aids in deciphering possible reasons for the increase in the number of fragmentary remains over time. What disturbed the equilibrium of the systems or what factor or factors could have caused the apparent increase in curation? Obviously, all of the populations in the five sites analyzed practiced inhumation of their dead. Most of the populations, particularly in the Levant, appeared to practice some form of curation. Curation intensified after the time of the disposals at Qafzeh. Skhul retained strong indicators of some form of curation, particularly the highly fragmentary remains of Skhul 11 through 26. Amud and Kebara

yielded more fragmentary remains than complete remains. Amud held two, possibly three, burials and Kebara retained two burials. The demographic structure of Qafzeh was broader, with all categories represented while the sites in the later time frames, Kebara and Amud, yielded more infant and toddler remains. The apparent higher incidence of infant and toddler deaths at Kebara and Amud may indicate greater mobility on the part of the population.

Mobility demands can have an effect on mortality at several levels, notably maternal, infant child, and in old age. Mobility may make insupportable demands on pregnant, and lactating women so that their mortality may be higher than otherwise. Mobility demands may work unfavorably on the survival of closely spaced infants and children. The elderly may not be able to keep up on the march and may not survive as they otherwise might. (Hammel, E. A. 1995:219).

Most of the remains of adults at both Amud and Kebara were neither sexed or aged. Whether the total demographic structure of the two sites fits with Hammel's mobility hypothesis cannot be ascertained. However, the high incidence of infant and toddler remains [8 and 3, respectively] and at least 5 children's remains at Kebara reflected the prediction of increased mortality for the immature.

If greater mobility was the cause of the increase in curation, what caused the increased mobility? The dates for Qafzeh corresponded with a period of moist and warm climates gradually degrading into a moist, cold climate (Jelinek 1992:268). The occupations of Kebara and Amud caves were during a cold phase. Did the moist, warm climate facilitate a more sedentary settlement pattern such as the radiating system

recommended by Marks (1988:116-117)? The more sedentary pattern would ease the mobility constraints on women in their childbearing years. The availability of elderly caregivers suggested by Qafzeh's demographic structure would also have eased the burden on females with young children since reliable caregivers for the young were potentially available in the form of elderly members of the social group (Hammell 1995:240-241). The colder, increasingly arid climate during the occupation periods of Kebara and Amud may have required more mobility in settlement patterns like Marks' circulating system. Greater mobility would account for the apparent increased mortality of infants and toddlers. If transportation of skeletal remains was part of the mortuary processing practices of the Amud and Kebara populations, increased mobility and increased mortality would have included increased transportation of the bone elements of deceased members as the social group moved from site to site. With deteriorating, more arid climatic conditions and with probable changes in the availability of subsistence resources, chances of returning to a site during a minimal time span would also be reduced.

SECTION C: Conclusions

Chapter 15: CONCLUSIONS

This study provides a synthesis of the data available in the literature on the hominid disposals in the Near East during the Middle Palaeolithic and an updated analytical catalogue of the hominid discoveries from this region. Archaeological and anthropological principles were applied in the data analyses of methods of disposal of the dead to illuminate general site, intra-site, and inter-site spatial and structural patterning. Several non-random and recurrent patterns emerged from these analyses which were unlikely to be the result of natural processes. The spatial and structural patterns observed in the disposals supported deliberate pre-modern hominid mortuary behavior through primary inhumation as well as some form of post-mortem mortuary processing of hominid remains and strongly inferred a symbolic prescience in the representation of the social distinctions and social *personae* of the deceased individuals as recognized by the surviving group members. These patterns, their implications, and potential explanations have been discussed at length in the preceding chapters. This chapter summarizes the findings of this study.

Contingency tables and matrices were devised and charts were generated to provide the foundation for the analytical analyses. Inferential statistical methods of analysis were not applied in this study for two reasons. First, the available sample was not robust enough to permit the application of statistical methods. At the individual level, some nominal variables [ie. burial attributes] were not described or were unknown such as the orientation of Qafzeh 3 or the sex of Qafzeh 7 and Amud 9. Rather than

eliminating the disposal from the analyses, the charts permitted the incorporation of all individuals and all the acknowledged disposal attributes. Second, the use of statistics emphasized time compression and obscured temporal changes. For example, on the basis of the number of articulated males and females in potential primary disposal contexts, sexual differentiation was strongly indicated for the region. On the other hand, the charts tended to imply that sexual differentiation was a temporal trend and developed over time. The most effective analytical approaches were formal analysis and strong inference. Formal analysis provided the means by which social complexity could be assessed through the formulation of trees and the assessment of redundancy and entropy. Even this application was somewhat limited as missing and/or contradictory information created interference or 'noise'. Modern excavation techniques and more attention to detailed information recovery will assist in the reduction of noise or interference. However, this kind of static will probably not be completely eliminated. For example, sex and age determinations, particularly for immature individuals, are not always accurate even in modern forensic cases. These kinds of determinations are more difficult for archaic, fragmentary osseous material. The other analytical method, strong inference, permitted the development of models which were testable and could potentially be disproven. These models are presented at the end of this chapter.

Role theory, ethnographic concepts of social age, issues of dominance and subordination derived from primatology and anthropological theory, and ethnographic examples were useful in the anthropological approaches to the analyses.

By treating each site as well as the various layers within the site as separate entities and by subdividing the skeletal population into relative discrete age categories, the structural patterns and spatial arrangements became more meaningful and certainly more relevant to an understanding of individual social group behavior. When all the evidence was combined, the various aspects of disposal of the dead in the Near East favored regional continuity. Transitions or changes in behavior occurred slowly over time. One incidence of change was evidenced by the difference in the skeletal element representations of disarticulated individuals between layers C and B at the site of Tabun. While this change may be used to indicate disjunction caused by an intrusive population, the sites of Skhul and Shanidar tended to bridge the differences between the earlier site of Qafzeh, the earlier occupations of Tabun, and the later sites of Kebara, Amud, and Tabun B. In fact, the Middle Palaeolithic in the Near East, appeared to be a period of social development with gradually increasing social complexity.

The criteria for the identification of primary interment are discussed in the next section as an answer to question 7, page 445. The identification of curation and post-mortem mortuary processing of hominid remains is more difficult. This behavior may potentially be recognized through: (1) non-random selection of fragmentary, skeletal elements; (2) the taphonomic history of the bones [ie. cut marks, gnaw marks, calcination, diagenetic alterations]; (3) deposition of the bones within the same disposal region as the articulated remains; (4) absence of osseous elements such as crania from relatively complete interments; (5) several skeletal elements deposited as a mass of bones in no anatomical order [secondary burial]; and (6) several skeletal elements with some

anatomical association. Cannibalism and cremation are specialized forms of curation. Cremation may be indicated by calcined hominid osseous material. The bones should be subjected to microscopic analysis. Calcined bones may also be indicative of cannibalism. Cannibalized hominid bones are frequently found in association with faunal bones. The evidence for damage to the faunal and hominid bones [cut marks, percussion marks, fracture patterns, and calcination] should be similar.

Certainly, natural processes cannot be eliminated in all cases of disposal in the Near East and these processes must always be considered as a possible means of the incorporation of a corpse in sediments as an articulated disposal. Two examples from the Near East may advocate natural inhumation due to rockfall or cave roof collapse, Shanidar II and V. However, non-random and recurrent spatial and structural patterns observed in the methods of disposal of the dead in the Near Eastern region tend to reduce the likelihood of natural inhumation for most of the articulated hominids, particularly in sites which do not exhibit evidence of catastrophic events. The average sedimentation rate of 33 cm. per 1000 years (Bar-Yosef 1992a:207) in Kebara suggests that complete natural inhumation of the skeletonized corpse of the Kebara 2 male hominid placed on his back and excluding the head would take at least sixty years and probably more [62.4 years] based on the minimum diameter of the right humerus [20.6 mm (Vandermeersch 1991:163)]. The likelihood of the survival of an articulated corpse in a cave intermittently occupied by hyenas, bioturbators, and other hominids for this length of time is minimal. The average sedimentation rate at Amud was 20 cm. per 1000 years (Kobori 1970:48)]. Based on a maximum breadth of 154 mm. (Suzuki 1970:127), the average

time necessary to cover the exposed cranium of Amud I, which was lying on its left side, was 770 years. As stated in Chapter 8 [pages 212 - 213] and in Chapter 11 [pages 293 - 294], crania are unlikely to survive without some form of protection.

One of the most striking features of disposal of the dead in the Near East was the consistency with which the combination of burial position and body orientation of articulated skeletal remains delineated age or life stage distinctions. This pattern appeared to be relatively consistent throughout the region and over time. This age associated characteristic adds considerable support to the growing body of evidence favoring deliberate inhumation.

Another significant aspect of mortuary behavior in the Near East was the evidence for the selection of a specific region of the site for the disposal of the dead. A selected disposal zone was recognized in four of the five sites analyzed in detail: Qafzeh, Skhul, Kebara, and Amud. Almost all of the articulated and disarticulated skeletal remains were discovered in these specific zones. Only a small portion of Shanidar has been excavated to date. Whether or not this population had a selected disposal zone or specific spatial allocations for deceased members is impossible to assess until more excavations can be accomplished in other areas of the cave. The disposal zone for Skhul, Amud, Kebara, and possibly Tabun and Dederiyeh were in northern areas of the site. Qafzeh may have differed as the selected region was the vestibule of the cave. This was either the north end of the terrace or the south end of the cave. However, the disposal of the Tabun C1 female in the northwest part of the site just outside the entrance of the cave

and the disposal of Tabun C3 and E2 on the talus just in front of the cave tends to emulate the disposal location at Qafzeh.

Fossil occurrences were discovered in a variety of disposal conditions. Some skeletons were almost complete and articulated. These individuals were probably primary disposals. Some individuals were represented by more than three skeletal categories with no articulation or association. These disposals were likely secondary burials. Secondary burial is a form of curation or post-mortem processing of human remains. Other fossil hominids were less complete; but, some skeletal elements, particularly legs, were discovered in articulation or with some degree of anatomical association. These remains were conceivably either disturbed and curated primary inhumations or secondary disposals. Others hominids were more fragmentary and represented by only one to three skeletal categories. The variety of disposal conditions for individuals of the same sex and from similar age categories tended to fit with concepts of dominance and subordination or emerging social distinctions. For adults, the evidence for social differentiation based on age and dominance/subordination advocated achieved status. In the later time frames, the variability in the disposal conditions of infants and toddlers suggested ascribed status for some of these immature individuals.

The inclusion of physically disabled and traumatically injured hominids as primary interments was another of the notable characteristics of disposal of the dead in the Near East. Potential inclusions, associated artifacts, and/or features were conjoined with all these individuals. Even the two Shanidar males whose deaths probably resulted

from injuries suffered in a cave collapse appeared to be accorded some form of post-mortem mortuary ritual.

For all the sites, considerable amounts of information were missing. These gaps impeded the validation of some of the apparent patterns and restricted the analysis. These ostensible patterns must be continuously reassessed as new excavations are conducted and as new information from old excavations is released.

In order to reduce the variety of patterns and their corollary explanations into models for mortuary behavior and for the social implications of these practices, the questions introduced in the first chapter must be re-addressed. These questions structured the approach to the data for each site and assisted in the resolution of the regional patterns.

QUESTIONS

1. What were the spatial and structural patterns exhibited through the disposal of the dead in each site.

In general, a specific region of the cave or rock shelter was set aside for the disposal of the deceased. Both articulated and disarticulated individuals were recovered in these specified regions. Most of the layers of Kebara complied with this pattern with the exception of three teeth which were discovered on the surface. For Skhul, Kebara, and Amud, the disposal region was in a north location. The deceased from Qafzeh were discovered in the vestibule of the cave. The situation of the Tabun C1

disposal resembled Qafzeh. No specific disposal area can be identified for Shanidar as too little of the cave was excavated.

Structural patterns within the disposal zone differed for most of the sites. At Qafzeh, immature individuals and young adults appeared to be positioned nearer to the terrace while older adults were generally closer to the interior of the cave. Articulated and disarticulated individuals were recovered from both regions. At Skhul, the bodies were spread across the terrace and outside the overhang of the shelter. Immature individuals were placed nearer to the overhang. Adult females were discovered at either end of the disposal zone. At Shanidar no specific structural pattern was discerned. Kebara and Amud had two distinct regions in their disposal zones. At Kebara, the 'more central' location contained the two male burials, as well as a few disarticulated remains. The 'near wall' region disposals were all disarticulated and two were identified as females. Amud's 'near wall' region held the burial of an infant, the disposal of an articulated leg, and disarticulated remains. Most of these disarticulated remains were long bone fragments of immature individuals. None of these remains were sexed. The 'away from the wall' region contained a male burial and cranial remains from another male and two toddlers.

The age correlated burial attributes of body position and orientation were generally consistent throughout the region and through time. The combinations of the position and orientation marked fine grained age distinctions and were compatible with socially prescribed life phases or social age. The least consistency was noted among the adult/middle-aged adult inhumations. The inconsistencies were most parsimoniously

explained by differences in social identities or roles and socially conceived issues of dominance/subordinance or status distinctions.

Skeletal patterns for disarticulated remains were noted. These patterns were generally site specific and frequently related to the age of the individuals represented. A remarkably high incidence of skull elements were recovered: cranium, mandible, maxillary dentition, and/or mandibular dentition. Portions of the axial skeleton were often absent from articulated or associated skeletons.

2. Are these patterns consistent throughout the layers or was change over time evident.

The designation of age distinctions through the combination of body position and orientation remained consistent over time for the five sites studied in detail. The two additional sites of Tabun and Dederiyeh included in the regional analysis also complied with this relationship.

Change over time was noted. The number of articulated skeletons decreased over time as the numbers of disarticulated ones increased. Diagnostically female articulated disposals virtually disappeared over time. The number of male articulated disposals also decreased; however, articulated males were still retrieved from the later sites of Kebara and Amud.

The intensification of curation as evinced by the decline in the numbers of articulated disposals and by the non-random selection of specific elements continued into the Early Upper Palaeolithic. Based on the data presented in *The Catalogue of Fossil Hominids, Part III: Americas, Asia, Australia* (Oakley, Campbell, and Molleson 1975),

most of the hominid fossils discovered in association with Transitional and early Upper Palaeolithic Industries were disarticulated remains. The sites, numbers of individuals, and skeletal representations listed were: Qafzeh [2 - frontal bone, calotte, mandible, teeth]; Erq El-Ahmar [1 - callotte, mandible, teeth], Kebara [8 - 4 mandibles with teeth, 2 humeri, 2 ulnae], El-Wad [at least 5 with several isolated fragments - 3 mandibles with teeth, teeth, cranial fragments, hand bones, tibia, and foot bones]; Antelias 1 [3 mandibles and long bones]. The site of Hayonim also delivered disarticulated Upper Palaeolithic hominid fossils [at least 3 - 2 crania, teeth, 1 vertebra, 1 femur, hand and foot bones]. As with the Middle Palaeolithic, the frequency of skull elements was high. D. Nadel (1994:113-114) also recognized the paucity of Early Upper Palaeolithic inhumations. One burial indicated for this period was Ksâr' Akil 1, an 8 year old female child. A second adult female burial, Nahal Ein Gev I, "was not discovered in a clear archaeological context although the majority of lithic material was typical of the Levantine Aurignacian" (Nadel 1993:114). Primary burials did not increase until the Kebaran.

A gradual increase in differentiation on the basis of sex was noted as a temporal trend. The decrease in the number of female articulated remains, the minimal segregation between the locations of male and female disposals at Skhul, and the more distinct separation of the burial locale into potential male and female disposal zones at Kebara and possibly Amud tended to indicate a gradual acknowledgment of opposite sex distinctions. The absence of adequate information in this regard tends to limit the credibility of this perception.

Generally, over time, the location of disposal zones seemed to move from the terrace and cave entrance into the cave. This transition also occurred at the intra-site level at Amud. The disposals in the lower levels of Kebara were all inside the cave as were those from Shanidar.

Another temporal difference was noted in the disposal of immature individuals. In the early site of Qafzeh, no infants were found as articulated disposals and only one toddler or young child was interred [Qafzeh 15]. The other toddler was disarticulated. A child and an adolescent were buried. At Skhul, the female toddler was the only relatively complete, articulated immature disposal. Another toddler was disarticulated. The child to adolescent, Skhul VIII retained only leg elements which were to some extent associated. Kebara and Amud held only one infant burial each and Dederiyeh contained a toddler inhumation. Over time, children and adolescents disappeared from the articulated burial population and infants and toddlers appeared as primary interments.

3. How did the intra-site patterns relate to the inter-site patterns?

For the most part, this question was answered in conjunction with the previous two questions. The relationship of age to body position, and orientation was noted in all the sites. The differences in the patterns complied with temporal changes and, to some degree, an expected level of socio-cultural variability.

4. What were the behavioral implications of the patterns.

and

12. Was differential treatment based on age and/or sex implied by the

structural patterns, the position of the bodies, or burial inclusions?

The Near Eastern Middle Palaeolithic hominids were deliberately inhuming certain deceased members of their social groups. The various disposal conditions implied the existence of alternative methods of mortuary treatment besides primary inhumation. Exposure was one possibility, cremation was another. Secondary burial was strongly indicated for disarticulated individuals represented by more than three skeletal categories. Curation in the form of removal of bone from disposals was suggested for such individuals as Kebara 2, Shanidar III, Qafzeh 10 and Qafzeh 15. The non-random selection of skeletal elements at Kebara and Amud augmented the likelihood of curation. The allocation of skeletal elements at Amud to either the 'near wall' region or the 'away from the wall' region of the disposal zone was fairly precise. The osseous elements 'away from the wall' were cranial fragments and the 'near wall' osseous elements were long bone fragments including the articulated leg of Amud 9. One exception was a fragment of the left zygomatic bone of Amud 14 which was discovered in disturbed deposits 'near the wall'.

The social correlates of the behavioral patterns advocated differentiation based on the age of the individuals. The variety of disposal conditions for same sex members of the society implied variability in social role and some level of dominance/subordinance or status recognition. Distinctions were noted for females as well as males. Sexual differentiation was less conspicuous than age discrimination; however, a more marked male/female dichotomy emerged over time.

The adult disposal conditions on a per site basis were not always amenable to formal analysis because of noise or distortion (Shannon 1949:75; Tainter 1978:113). Noise was evinced through absence of information, contradictions in the literature, and lack of consensus on the deliberate nature of inclusions. The inconsistencies interfered with the use of attributes to structure trees. However, social distinctions were implied by the variability in disposal conditions in conjunction with the other structural patterns of the sites. This implication must be proven.

Inclusions were more frequently recovered with male disposals. This may indicate some level of sexual differentiation. No sex specific artifacts were noted.

5. Do the patterns reflect some form of symbolic response?

The recognition of age through the two burial attributes of orientation and body position was intricate and symbolic. For example, infants were buried on their right sides in a north-south orientation while toddlers, children, and adolescents were buried on their backs. Toddler orientations were south-north; children were orientated east-west; and the adolescent was buried in a north-south position like young adults. The young adults lay on their left sides. Adults were placed on the left side as well with a south-north orientation. The greatest variability occurred in the middle-aged adult category. Middle-aged adults were generally positioned on their backs. Two males, Shanidar I and Skhul V, were orientated west-east while the others, including one female [Tabun C1], were orientated in the opposite direction, east-west. Elderly adults were discovered on their right sides in an east-west orientation. At least one attribute [orientation or body

position] was changed with each life phase transition. Age or life stage distinctions were obviously important to the social organization and the cosmology of the group members who symbolically registered these features in the manner in which they buried their dead.

On a per site basis, the non-random selection of skeletal elements may exhibit some age-related or other social correlates which were symbolically marked. For example, the high incidence of appendicular elements representing immature individuals in the 'near wall' position at Amud may suggest an age relationship in the selection of elements. Too much information was missing to adequately address this point.

6. How did the hominid remains enter the deposits?

The consolidation of articulated and disarticulated remains in a localized disposal area, the structure of the articulated disposals, the consistencies in the designation of age through burial attributes, the unusual positions of the head in many primary disposals, and the non-random patterns of skeletal category representation in some sites argued favorably for deliberation in the placement of individuals through the agency of hominid activity. However, taphonomic information was not always presented in the discussion of skeletal remains, particularly the disarticulated ones. The extreme fragmentation of the disarticulated, single element remains from Skhul did not necessarily support hominid intervention in their disposal. These bones require re-examination for evidence of carnivore damage, cutmarks, or other taphonomic indicators. The absence of information on the highly fragmentary remains from the sites, with the exception of the remains from the most recent and systematic excavations at Amud and Kebara, makes the

assessment of agency for disarticulated remains difficult to resolve for every case. The precise patterning at Amud seemed deliberate and related to hominid behavior. The absence of long bones or fragments of long bones at Kebara and the high incidence of teeth favored a hominid involvement; but, carnivore activity could not be eliminated. Certainly, the articulated primary disposals should be considered the result of hominid enterprise.

7. What criteria supported deliberate inhumation?

The principal criterion for inhumation was articulation or anatomical association of skeletal elements. Other features assisted in substantiating the premise of deliberate interment: (1) the number of skeletal element categories incorporated in the disposal, (2) the presence of a pit or cairn, (3) non-random body positions, (4) specialized locations for the disposal of the dead, and (5) potential inclusions. The age related body positions and orientations discussed previously offered a strong defense for the deliberate nature of primary interments.

8. Why were some individuals buried while others were apparently not buried?

The patterns noted in the Near Eastern disposals tended to justify deliberate activity in the case of many of the disarticulated disposals as well as the articulated ones. Certainly some individuals were primary interments while others were secondary burials. The selectivity of the elements representing some of the extremely fragmentary, disarticulated remains favored curation with eventual disposal in the same

region as the articulated burials. As stated earlier, the variety of disposal conditions suggested that surviving group members acknowledged the social roles, social *personae*, dominance/subordinance, or status distinctions of deceased members through primary disposals, secondary disposals, and curation. In general, status or dominance was evident for females and males and was likely achieved with increasing age and/or through exceptional abilities in hunting, gathering, skinning game, butchering, warfare, knapping, ritual activities, or other endeavors which were valued by the society as a whole. The unique orientations of west to east allied to two male interments, Shanidar I and Skhul V, may have designated some special role for these individuals such as a charismatic leader.

9. What was the significance of the inhumation of immature individuals?

Infants were discovered in two disposal conditions. Two or three of the infants were articulated skeletons: Amud 7, Shanidar 7, and possibly Kebara 1. The other twelve infants were disarticulated and were marked by one to three skeletal categories. Potential inclusions appeared in the disposal units of the three articulated skeletons. A relatively complete red deer maxilla was placed across the pelvis of Amud 7. A mammal bone fragment was located 1 inch east of Shanidar 7's knee and a large flint was found two inches from its head. Kebara 1 was associated with a rhinoceros tooth and three stones. Formal analysis is useful on a per site basis to identify the degree of entropy or disorganization. The application of formal analysis to each site which contained infant primary interments distributed the two burial conditions into a perfect tree and indicated redundancy. For example, infants were either articulated [formal

burial] or disarticulated [curated]. Articulated disposals contained potential inclusions and disarticulated ones did not. This distribution suggested that some sort of status distinctions were registered. For infants, this is generally ascribed status. At the site level, ascribed status was not indicated at Qafzeh for infants. Both infant remains were disarticulated. Based on the absence of infants at Skhul, ascribed status for infants cannot be determined. The remains from Shanidar, Kebara, and Amud did fit the premise of ascribed status for infants.

A similar distribution was indicated for toddlers on a per site basis. Toddlers were discovered in three disposal conditions. Two of the twelve toddlers were complete primary disposals: Skhul 1 and the Dederiyeh Infant. Both disposals rendered artifacts in association with the skeletal remains. At Qafzeh, one older toddler or young child was found as a partial, articulated skeleton with no inclusions [Qafzeh 15]. The balance of the toddler remains, a total of ten, were disarticulated and denoted by one to three skeletal categories. Qafzeh retained three to four toddlers: one was mentioned above, the others were designated by 2 cranial fragments, 1 mandible, and teeth. None of the disposals contained inclusions. Minimal redundancy was noted as there was only one attribute, the condition of the disposal. The Skhul I toddler was articulated and the burial included flint pieces without evidence of retouch. The other toddler from this site, Skhul X, was disarticulated. Redundancy was recognized and ascribed status for some toddlers was implicated. No toddlers were found at Shanidar. Toddlers were disarticulated at Kebara. No ascribed status was recommended. At Amud, three toddlers were encountered. All were disarticulated and no inclusions were found. Locational

separation was visible. Two toddlers were positioned 'away from the wall' and were designated by cranial fragments. The other toddler was 'near the wall' and represented by long bone fragments. This allocation may denote sex distinctions, but not necessarily ascription. The Dederiyeh toddler was the only primary interment discovered to date in this site. A subrectangular limestone block was discovered above the cranium of the Dederiyeh toddler and a triangular flint was found on its chest. A fragmentary infant was found. The Dederiyeh pattern may designate ascribed status for the toddler.

Articulated children and adolescents were found in two sites: Qafzeh and Skhul. At Qafzeh, one child [Qafzeh 10] was articulated. Ocher was found in the fill matrix. Teeth marked two disarticulated children at Qafzeh. The adolescent [Qafzeh 11] was articulated and a number of inclusions were discovered. While this pattern recommended ascribed status for children and possibly adolescents, the information derived from all the immature disposals in Qafzeh implicated the gradual acquisition of full social membership. The adolescent from Skhul [Skhul VIII] was represented by leg elements in association. His disposal condition was similar to two adult males. No ascribed status was indicated. Children were not part of the articulated disposal population recovered to date at Shanidar. Children and adolescents from Tabun, Kebara and Amud were teeth and therefore disarticulated. Ascribed status was not indicated.

In summary, ascribed status was recommended for some of the immature remains in the Near East. At Qafzeh, gradual acquisition of full social membership was suggested by the disposal conditions. At Skhul and possibly Dederiyeh, ascribed status for some toddlers was recommended. No status ascription was indicated at Tabun. The

disposal circumstances at Shanidar, Kebara, and Amud insinuated ascribed status for infants.

The connotation of the increase in the numbers of infants and toddlers encountered in the deposits over time was increased infant/toddler mortality. Increased mortality possibly associated with increased mobility and changes in climatic conditions. However, the numbers of immature individuals recovered in the sites studied were not necessarily representative of all the immature individuals who died in the Middle Palaeolithic. Increased mortality for infants and toddlers may be more apparent than real. Before the advent of modern medicine, infant and toddler mortality was high.

Infanticide, particularly female infanticide, cannot be eliminated as a possible reason for the apparent increase in infant and toddler remains. A detailed forensic analysis of the remains of Skhul I is warranted.

10. Could any of the fragmentary remains distributed in the sites belong to the same individual and how could the association of remains be determined?

Individuals discovered from the same site, at similar depths below datum, and in the same region may associate particularly if the age ranges allocated to the remains are similar. The isolated teeth at Qafzeh may associate with articulated or disarticulated remains from the site. Some of the fragmentary remains at Skhul may belong to some of the interments. Some of the isolated remains from Kebara may belong together: Kebara 6, 9, 11, and 17 may associate; Kebara 18, 19 and 20 may be the same individual; Kebara 21, 22, and 23 may correspond to the same hominid. The various depths below datum and ages of the disarticulated remains at Amud did not correlate well

for association. Amud III and Amud 18 might be examined for correspondence to the same individual. The same may be true for Amud 15 and 16.

Curation and transport of hominid skeletal elements may have been featured as part of the Middle Palaeolithic mortuary practices. The likelihood of associating skeletal material from one site with skeletal material from another is extremely remote although not impossible if the sites are contemporaneous.

Methods of associating skeletal remains are somewhat inadequate for archaic, fragile osseous elements. Bone density studies, DNA analysis, and trace element analysis require the destruction of bone.

11. What other methods of disposal, besides inhumation, were insinuated by the patterns?

and

14. What evidence existed for mortuary treatment such as cannibalism or curation?

To some extent, these questions were answered with questions 4 and 12.

As stated previously, four disposal conditions were recognized in the patterns of disposal in the Near East: articulated [primary] interments, skeletal remains comprised of more than three skeletal categories in no anatomical association or articulation [secondary burials], disposals with some elements in articulation or association [disturbed primary inhumations or secondary burials]; disarticulated remains represented by one to three skeletal categories [curated remains]. Secondary burials indicated some other form of primary disposal. No precise evidence was encountered that specifically identified the alternative form of disposal. Exposure and collection of the remaining skeletal elements or removal from primary disposals in other sites [curation and transportation] were two

possible explanations. Secondary disposal is a form of curation. Curation was also indicated by other features: the missing crania of Kebara 2 and Shanidar III, the absent lower body of Qafzeh 15 and feet of Qafzeh 10, partially articulated or associated skeletons with other elements out of anatomical order; and the non-random selection of skeletal categories noted in some sites. Cremation may be indicated by the calcined cranial fragment from Skhul and the absence of long bones or long bone fragments at Kebara. Cannibalism might be suggested for the extremely fragmentary, disarticulated, single element remains at Skhul.

13. What constituted an inclusion and what tests could be applied to ascertain whether an inclusion was deliberate or fortuitous?

The differences between deliberate and fortuitous inclusions were not clearly delineated. The unique physical arrangement of potential inclusions supported the premise of deliberate offerings. Examples of this pattern in the Near East were: the antler found on the arms of Qafzeh 11 and the fragment of ostrich egg shell discovered on his chest, the red deer maxilla located on the pelvis of Amud 7, the triangular flint situated on the chest of the Dederiyeh Infant, the wild boar mandible deposited between the arms of Skhul V, and the lithics arranged between the hands of Skhul IV. The more complete faunal remains were likely inclusions as most of the dietary faunal residues were fragmentary. Faunal inclusions which did not correspond to the dominant fauna discovered in the site were exotic elements and likely deliberate offerings. Hearths containing mammal bone fragments and/or lithics tended to suggest post-mortem mortuary ritual.

Rather than assuming the offerings were fortuitous, materials from units in the immediate proximity and at the same depths below datum as the disposal should be compared to the elements discovered in the disposal unit. If the materials from the stratified random sample were similar in both types and relative numbers, then the offering or offerings were likely fortuitous. Otherwise, the materials should plausibly be considered deliberate inclusions.

COMPARISON WITH PREVIOUS STUDIES

The approach of this study of Middle Palaeolithic methods of disposal of the dead differed from most of the others in several aspects: (1) the disposal population was separated into age categories; (2) site specific patterns were addressed first; and (3) the regional analysis drew all the considerations together to provide a parochial and temporal assessment of the disposal patterns in the Near East during the Middle Palaeolithic. The reason for the consideration of site specific patterns first was based on two premises. First, most ethnographic societies have their own cosmology and approach to death. Logically, Middle Palaeolithic hominid groups probably developed their own cultural outlook and demonstrated these in their treatment of the dead. The initial part of the study focused on patterns which could be allied to cultural or social group preferences. Second, temporal and spatial compression obscured particular social or cultural expressions of behavior. The similarities and differences between sites, derived from the site specific analysis, facilitated the recognition of broad regional patterns and temporal trends.

The criteria for deliberate inhumation described by most of the researchers were important and contributed to the analysis. The principal criterion for inhumation was anatomical association and articulation of skeletal elements. The greater the number of skeletal elements in articulation or association, the greater the likelihood of deliberate interment. Inclusions were the least useful criterion. Although body positions and orientations varied; regional similarities based on life stages as noted through age categories were marked. The amalgamation of presence of a preferred disposal zone, allocation to a specific region in the zone, and the combinations of burial position and body orientation associated with ages throughout the region and in all the time periods were strong indicators of the deliberate nature of the interments..

Binford's interpretation of more social distinctions for immature hominids from the Near East as compared to immature individuals from Western Europe cannot be addressed at this stage. Certainly, social distinctions were noted for all ages and these correlated with life stages and the timing of transitions between them. The variability in adult to middle-aged adult body positions and orientations suggested achieved status and aspects of dominance and subordination. As stated previously, ascribed status may be indicated for some infants and toddlers from the time frame of Skhul and continuing on through the later phases of the Middle Palaeolithic.

Harrold's interpretation of socio-cultural variability in mortuary behavior was not as strongly supported by the analysis as expected. The age distinctions recommended by the analysis of body position and orientation of articulated disposals were regionally similar and appeared to remain stable throughout the time span. The

more fragmentary remains tended to support some degree of 'socio-cultural variability', particularly for the selection of skeletal elements. The numbers of identified males were greater than those of identified females: 22 males to 15 females. However, at least ninety-nine individual fragmentary remains have not received a sex diagnosis. Therefore, the differences in numbers may not be remarkable. If females were more frequently incorporated as fragmentary remains, then sex distinctions may be indicated. Definitely more males than females received primary interment. This also recommends some sexual differentiation. Inclusions cannot be properly assessed at the present, although males were more likely to be interred with inclusions. Physically disabled and traumatically injured hominids were incorporated as primary burials and most of these interments contained potential inclusions.

Bonifay's assessment of the symbolic and behavioral significance of Middle Palaeolithic disposals was also reinforced. The body positions and orientations allied to specific age categories were certainly symbolic representations. Variability in disposal conditions delineated social distinctions and implied a greater complexity in the social *personae* of individuals than previously acknowledged.

The evidence derived from this study indicated a stronger pattern of symbolism and a more precise structure to the deposition of hominids than Belfer-Cohen and Hovers' had recognized.

The differences between the modern human populations [Qafzeh and Skhul] and the so-called Neandertal populations [Amud, Kebara, Tabun, Dederiyeh, and Shanidar] as suggested by Hovers *et al* (1995) existed. Certainly the modern humans

maintained more complete inhumations, with the exception of Shanidar. However, these differences seemed more consistent with time related changes than with real differences in behavioral approaches. Both groups appeared to practice some form of curation in addition to inhumation. Both groups symbolized the age distinctions of their populations in the same fashion.

Aleskin was correct in assuming transformations in burial practices were gradual. Certainly, the chronological implications in the Near East favored a gradual increase in social complexity marked by social distinctions and perhaps an increase in social status indicators. The social complexity was registered in the variety of burial conditions. Sexual differentiation became more evident over time.

Tillier's caution against prematurely assuming greater complexity in the treatment of modern human children was confirmed. The differences in the treatment of immature individuals was complex in both the modern human and supposed Neandertal sites.

Ullrich's studies of selection of specific skeletal elements from the dead was corroborated in the site specific analyses. The high incidence of skull remains in the deposits was also substantiated. Whether the selected elements were subjected to mortuary ritual was less conclusive. Certainly, curation appeared as a form of mortuary treatment. Secondary interment, cremation, cannibalism, display of skeletal remains, or transportation from original interments to new sites help to explain potential aspects of this activity. Ethnographic and archaeological examples have already been offered as explanations for curation.

This research also tended to substantiate concepts presented by André Leroi-Gourhan (1964). Like Ullrich, Leroi-Gourhan (1964:58-59) recognized the high incidence of cranial elements recovered, many of which were also associated with other skeletal remains. He found the conditions and contexts of the skeletal remains to be similar to those of burials from the Middle Ages and to emulate the funeral cave of Mesnil-sur-Oger. In general, he found the patterns exhibited by the hominid remains resembled either dietary residues like the faunal remains of carnivores or hominids or agreed with contexts of primary disposals in protected environments.

Defleur's book was invaluable. Many of his insights were supported. Defleur's study focused mainly on burials in all the regions of Neandertal expansion during the Middle Palaeolithic. The differences in the approach of his investigation and this study accounted for any discrepancies.

CURATION

Brown's (1981:31, 34, 36) use of the terms post-mortem processing or curation have already been interpreted as part of a long term process of mortuary treatment which originated in a crypt. The crypt in this case was the burial pit or primary interment. A array of explanations were generated to elucidate possible reasons for curation. Display of skeletal remains was discussed as one possible explanation for curation. The use of burials or the display of remains to claim ownership or usufruct rights over territories was also offered as a potential impetus for inhumation and curation. The maintenance of social continuity and integrity was suggested as an incentive for

curation and possible transportation of bones from site to site. Returning some bones of an individual to the natal territory was another potential cause for curation and transportation. This activity was practiced in this region during the Bronze Age (Rolland 2000:personal communication).

Other possible explanations for curation or apparent curation of cranial remains, in particular, are warfare and trophy collection. The Tlingit, the Kwagiuth, and the Central Coast Salish of the Northwest Coast region of Canada frequently scalped and/or decapitated enemies, particularly males, as retribution for the death of a relative or as a result of raids (Laguna, Fredrica de 1990:215; Codere 1990:359; Suttles, Wayne 1990b:465). These trophies were often displayed on poles. The Jivaro of South America collected the heads of their enemies to increase their status (Service 1978:209) and to capture “the supernatural powers of the victim whose head is taken” (Murphy, Robert F. 1989:171). The Mundurucú also collected heads to please the forest spirits (Murphy 1989:171). Shanidar III was missing his head and he had been injured before his death. Perhaps the Middle Palaeolithic practice of curation, particularly the curation of skulls, reflected the acquisition of the supernatural powers of the deceased individual.

MODELS

Many issues related to disposal of the dead in the Near East need to be resolved. These include taphonomy and provenience, particularly for isolated fragmentary remains. Potential patterns related to the arrangements of isolated osseous elements cannot be considered until this is accomplished. Age allocations and sexual

diagnoses for isolated skeletal elements may not be possible or may be inadequate at best. These practical limitations will restrict the degree to which these hominid remains can be analyzed.

DNA analysis to determine biological kinship would prove extremely useful in the resolution of social issues as well as morphological ones. For instance, DNA analysis might assist in the determination of whether related males stayed together and females migrated in or vice versa.

Several aspects of Middle Palaeolithic comportments were recognized through the patterns of disposal of the dead during the Middle Palaeolithic in the Near East. Insufficient data precluded the incorporation of many of these as models for behavior.

Dating was also problematic, particularly since date ranges were very broad. In this study, Qafzeh was used as the oldest site; it was the most securely dated. However, the date ranges of Tabun and Skhul overlapped with those from Qafzeh. Shanidar may be older than the Carbon-14 dates suggest. The date for the Tabun C1 female is uncertain. Re-dating some of the hominid remains by non-destructive gamma-ray spectrometry may reduce some of this confusion.

At this point in time, only 27 of the 136 to 141 individuals discovered in the deposits of the Near East were articulated disposals. [See charts from Chapter 8, page 211 - 212, and from Chapter 14, page 369]. Age distinctions were registered in the combined attributes of body orientation and position. Body positions were identified for 21 individuals and orientations were known for 18 individuals. This data was not

statistically amenable due to insufficient numbers of individuals in each age category.

For this reason, this age related patterns can only be represented as a model and not an hypothesis. The pattern must be tested against new discoveries before it can become an hypothesis.

Based on the results of the analysis of disposal of the dead in the Near East and the application of principles of strong inference, several models were devised to account for the various aspects of the mortuary behavior of these populations. These models require rigorous testing. The models are the ones most readily demonstrated by the data. They should not be misconstrued as hypotheses because no experimentation has been accomplished in this study.

The first models designate locational patterns.

MODEL 1:

Middle Palaeolithic populations in the Near East selected a specific region in their sites for the disposal of deceased members of their social group.

MODEL 2.

The northern region of the site was generally preferred for the disposal of the dead.

Later Middle Palaeolithic populations may have divided their disposal zones into male and female regions. This feature cannot be introduced as a model because of lack of information. This possibility should be carefully examined in future excavations.

The following models are based on the disposal conditions encountered in the Near East. The combined attributes of orientation and body position tended to designate specific age related life stages. In ethnographic societies, life stages are based on physical changes and/or socially recognized distinctions rather than chronological age. Physical changes are variable at the individual, sexual, and ethnic group levels. The age allocations for each phase discussed in the last chapter must be expanded to incorporate this differential timing of physical change. Furthermore, physical disabilities tended to advance individuals into different life phases. The age categories now incorporate overlap to accommodate differential timing of life stage transitions:

Infants - 0 months to 2 years
Toddlers - 18 months through 5 years
Children - 5 to 10 years
Adolescents - 8 to 18 years
Young Adults - 15 to 25 years
Adults - 20 to 35 years
Middle-aged adults - 30 through 45 years
Elderly adults - > 40 years

MODEL 3:

Age was the principal variable registered in Middle Palaeolithic methods of disposal of the dead. By inference, age was an important feature of Middle Palaeolithic social organization.

MODEL 4.

Sexual differentiation between males and females developed gradually during the Middle Palaeolithic.

MODEL 5.

Age distinctions in the Middle Palaeolithic were registered through the combined attributes of body position and orientation for primary disposals. Infants were buried on their right sides with a north to south orientation. Toddlers were placed on their backs in a south to north orientation. Children were deposited on their backs and orientated east to west. Adolescents were also positioned on their backs with a north to south orientation. The orientations of young adults were the same as those of adolescents; but they were found on their left side. Left-sided burials were given to adults; however, they were orientated south to north. Middle aged adults were placed on their backs with either an east to west or a west to east orientation. Elderly adults were situated on their right sides with an east to west orientation.

Middle Palaeolithic populations were discovered in four disposal conditions: (1) primary articulated inhumations; (2) secondary disarticulated interments with more than 3 skeletal categories represented; (3) primary disturbed and curated disposals with some articulation or association of skeletal elements; and (4) fragmentary, curated depositions of one to three skeletal categories. More information is required before the disposal conditions can be divided into precise burial or mortuary formats which can be presented in models to be tested, particularly the nature of curation and the clarification of possible cannibalism or cremation. At this point, primary burial and secondary disposal [curation] were the two most securely established mortuary practices. The variability of disposal conditions may be used to generate a behavioral model which is relevant to Middle Palaeolithic social organization, particularly in terms of status distinctions, social roles or identities, and social *personae*. Model 6 has been tested to a limited extent in the thesis using formal analysis. This model must be retested with new

fossil discoveries. Noise or distortion must be reduced during the process of investigation.

MODEL 6.

The variety of disposal conditions for adults indicated age related achieved status, socially prescribed dominance/subordinance, an increase over time in the numbers of social identities recognized at the individual level and in the complexity of social *personae*. Ascribed status for infants and toddlers emerged during the Middle Palaeolithic.

MODEL 7.

Physically disabled and traumatically injured individuals were accorded primary burial and/or mortuary ritual.

MODEL 8.

Curation or post-mortem processing of skeletal remains was a feature of Middle Palaeolithic mortuary practices. The non-random selection of elements was site specific and registered socio-cultural variability. The skull [cranium, mandible, teeth] was the most frequently represented portion of the body. Curation intensified over time and continued into the Early Upper Palaeolithic in the Near East.

MODEL 8A:

Curation was part of a long term practice of mortuary processing of the skeletal remains of deceased members of the social group.

OR

MODEL 8B:

Curation was one of at least two methods of disposal of the dead in the Middle Palaeolithic. The other definitive form of disposal was primary burial.

To reiterate, curation was recognized as secondary interment or as the non-random pattern of skeletal elements in the same specified disposal zone as the

inhumations. Curation also included cleaning and display of bone as well as specialized practices such as funerary cannibalism and cremation. Skeletal element representation may also have marked the age of the individual and perhaps the sex. The absence of information on disarticulated remains does not permit the incorporation of this consideration as one of the models. This aspect of curation should be noted during site investigations to determine the accuracy of this assessment.

The regional continuity suggested by the disposal patterns in the Near East may be explained in two ways. The regional continuity in disposal of the dead in the Near East indicated *in situ* development within a single, morphologically variable population. The second alternative defends the principle of acculturation and admixture. Early anatomically modern humans encountered archaic human groups and/or Neandertal populations in the Near East. Acculturation and interbreeding occurred and the populations from the region represented an admixture of early anatomically modern humans from Africa, archaic populations already occupying the region, and/or Neandertals who migrated into this sector during the Middle Palaeolithic.

The results of the morphological analysis of Arensburg and Belfer-Cohen (1998) disputed the presence of Neandertals in the Levant. While Marks (1992:245) explained the discontinuities apparent in the Levant as the “spread of peoples, not from Africa, but from the north and east”; he also recognized considerable technological and typological continuity on the regional level in the Levant. Based on the information from both of these studies, the regional continuity for disposal of the dead practices between the sites studied in detail, as well as Tabun and Dederiyeh, was most reasonably

explained as an *in situ* development within a morphologically variable population. However, interbreeding and multilateral acculturation cannot be completely excluded. Interbreeding may be the source of the morphological variability within the Near Eastern hominid populations, particularly the so-called Neandertals. A 25,000 year old skeleton of a male child was discovered at Abrigodo Lagar Velho in the Lapedo Valley of Portugal which bore morphological characteristics of both Neandertals and modern humans. The skeleton, studied by Erik Trinkaus and Joao Zilhao, supported hybridization (Harrison, Spencer P. M. 1999:20).

The models listed above must be tested and retained, modified, or discarded in accordance with the results of experimentation. While the actual explanations for the behaviors may never be discovered, the patterns can be demonstrated to be relevant and symbolic.

Regardless of which models are proven to be correct, complexity in the representation of the dead increased over time. This should not be surprising as Later Upper Palaeolithic societies registered a dramatic change in social structure and more striking representations of social identity and to some extent status. Change of this nature did not occur in a vacuum. The foundations for the changes must have developed from gradual transformations of pre-existing social structures. The transitions over time in the Near East and the gradual increase in complexity tend to recommend the behaviors of these populations as the roots or foundations for the eventual expression of Upper Palaeolithic behavior in this region at least.

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APPENDIX

APPENDIX 1: REGIONAL MAPS



Figure A.1: NEAR EAST REGIONAL MAP.

(Drawn using Akazawa, Dodo, Muhesen, Abdel-Salam, Abe, Kondo, Mizoguchi 1993:364; Nishiaki & Copeland 1992:108; Senyurik & Bostanci 1956:83, fig 1; Solecki 1971:22; Yalçinkaya 1995:403).

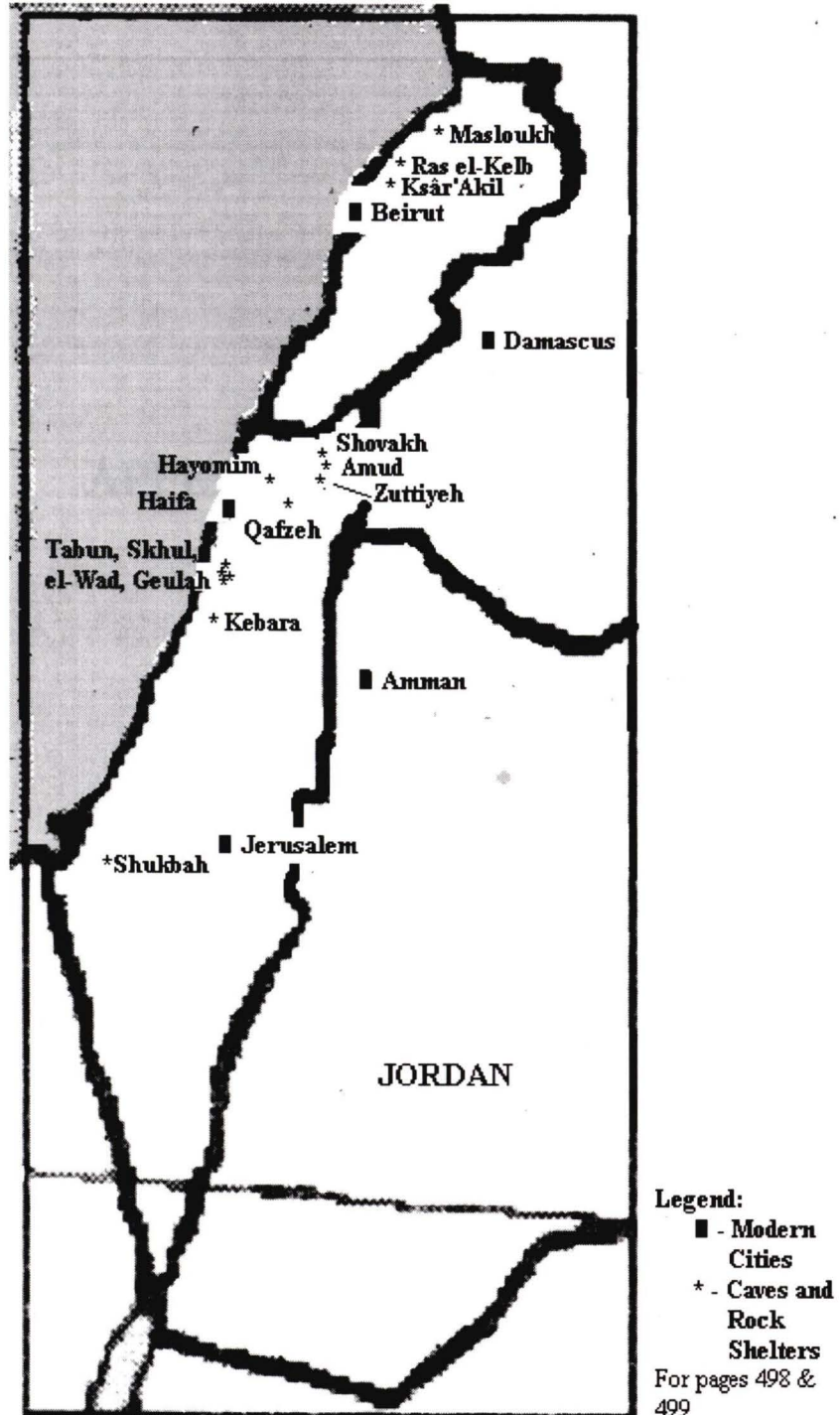


Figure A.2: NEAR EAST REGIONAL MAP (INSET)

(Drawn using Bar-Yosef 1989:591; Bar-Yosef & Goldberg 1988:20, fig. 1; Binford 1966:19; Nishiaki & Copeland 1992:108)

APPENDIX 2: SITE MAPS

Appendix 2.1: AMUD

(pages 502 - 505)

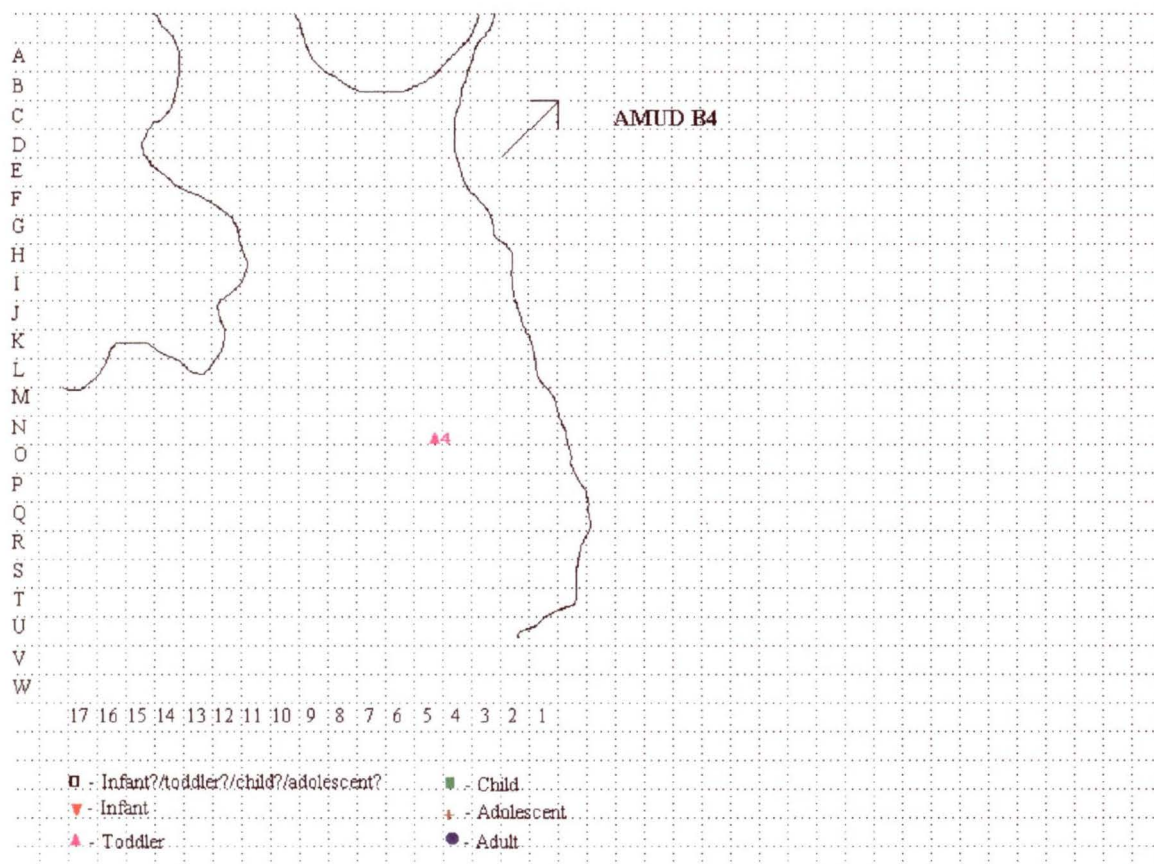


FIGURE A.4: AMUD LEVEL B4

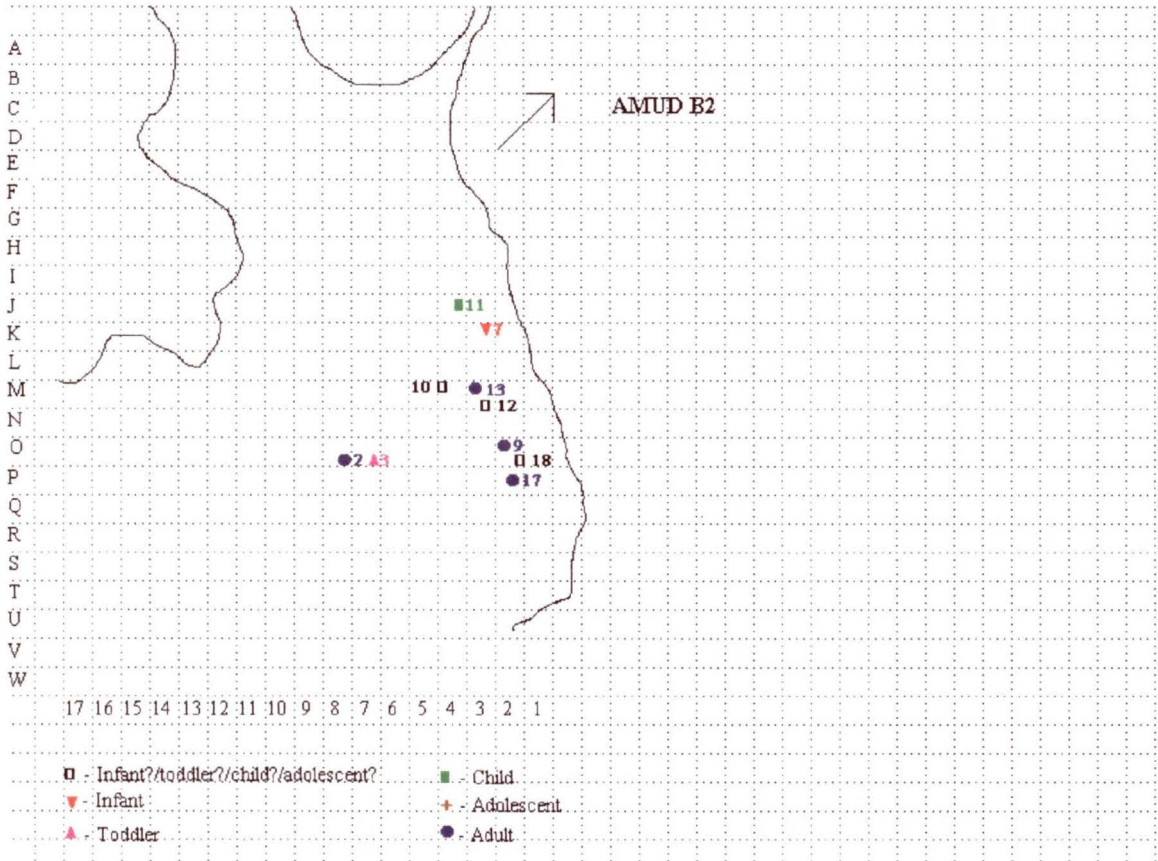


FIGURE A.5: AMUD LEVEL B2

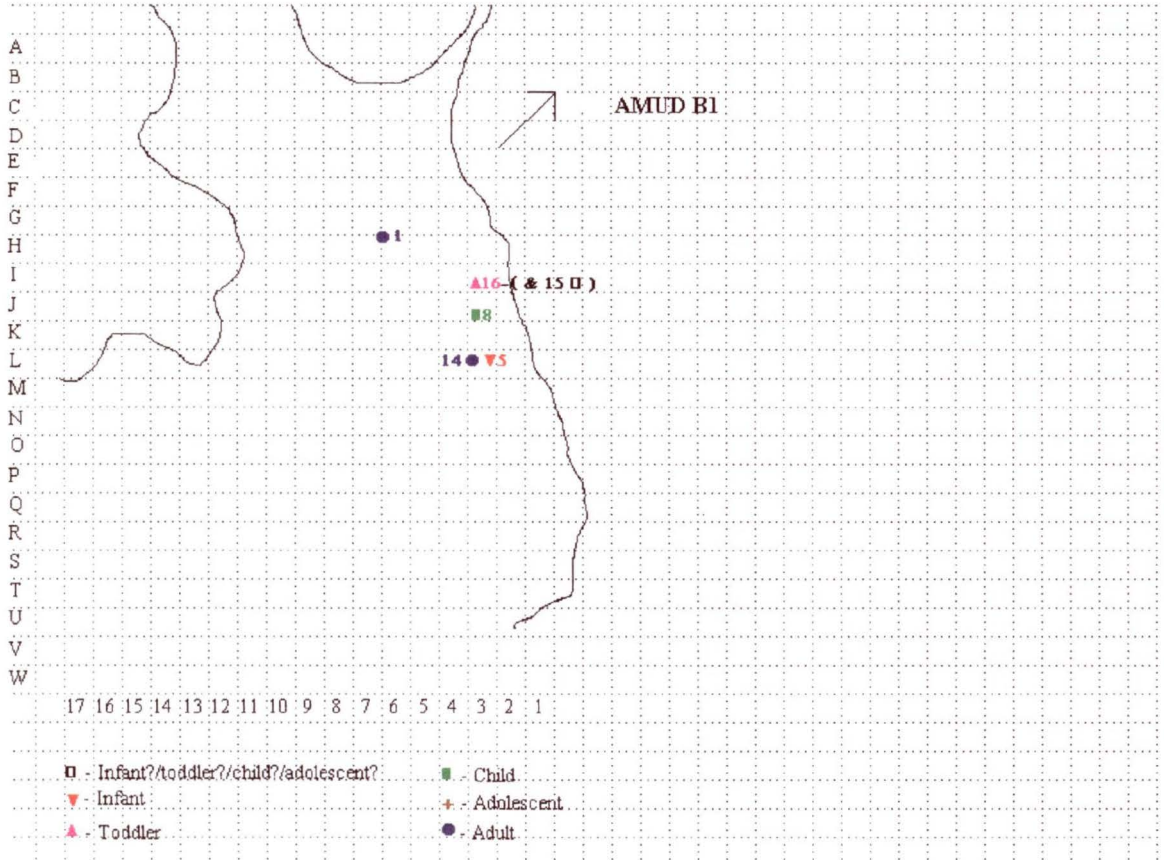


FIGURE A.6: AMUD LEVEL B1

Appendix 2.2: KEBARA

(pages 507 - 513)

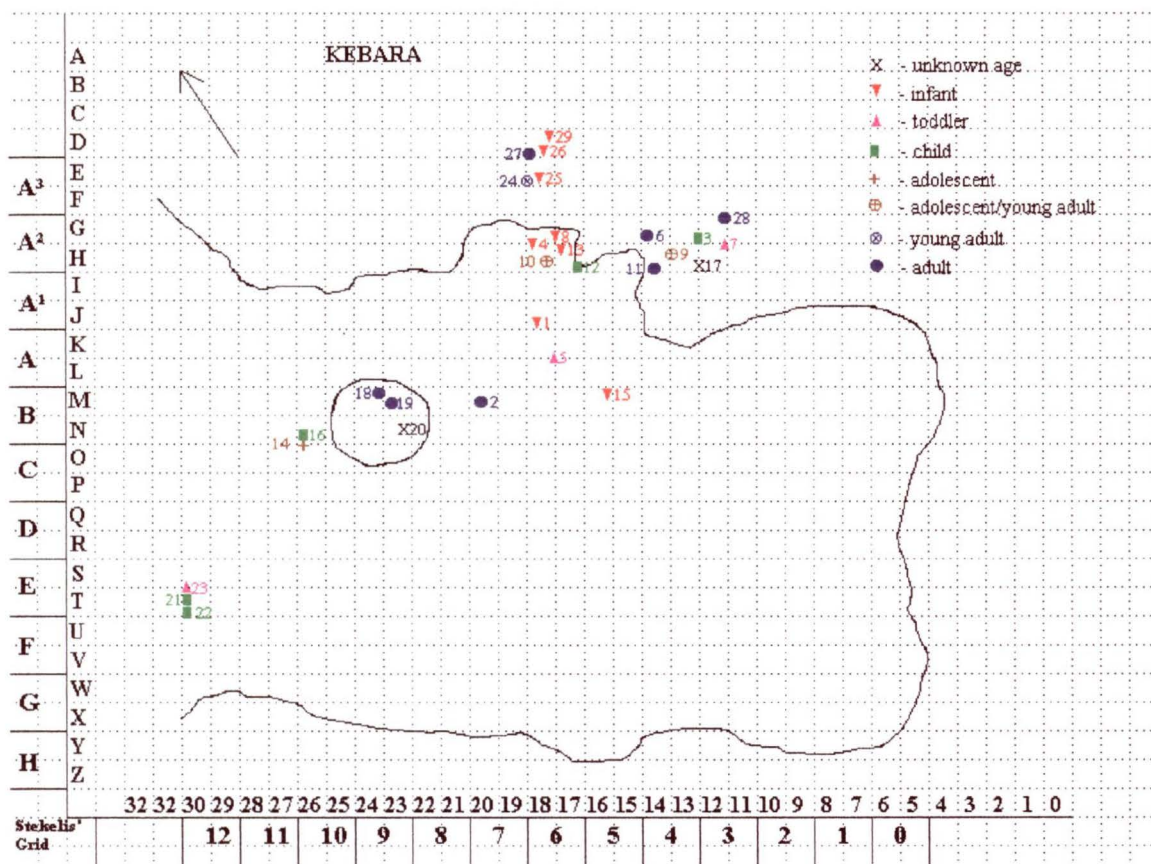


FIGURE A.7: KEBARA SITE MAP

(Drawn after Bar-Yosef 1991:22; Bar-Yosef, Vandermeersch, Arensburg, Belfer-Cohen, Goldberg, Laville, Meignen, Rak, Speth, Tchernov, Tillier, Weiner 1992:526 -527)

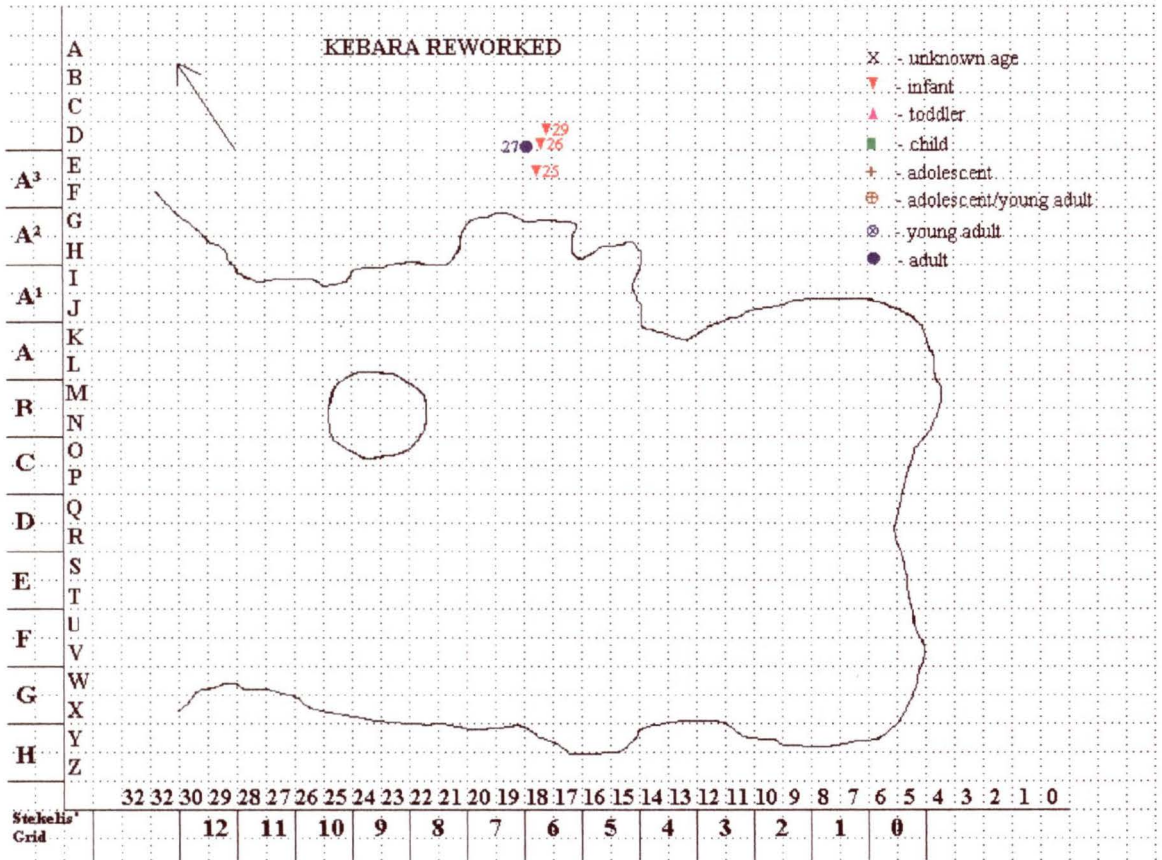


FIGURE A.8: KEBARA REWORKED DEPOSITS

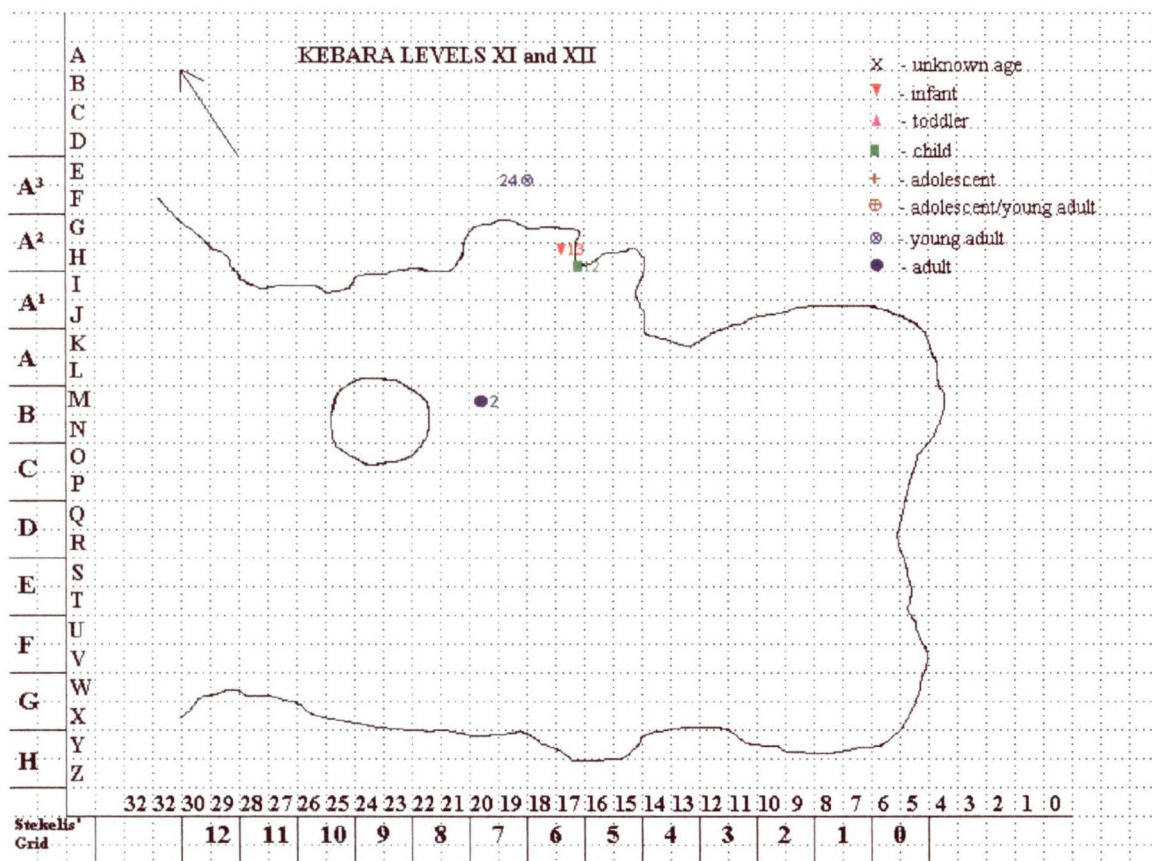


FIGURE A.9: KEBARA UNITS XII - XI

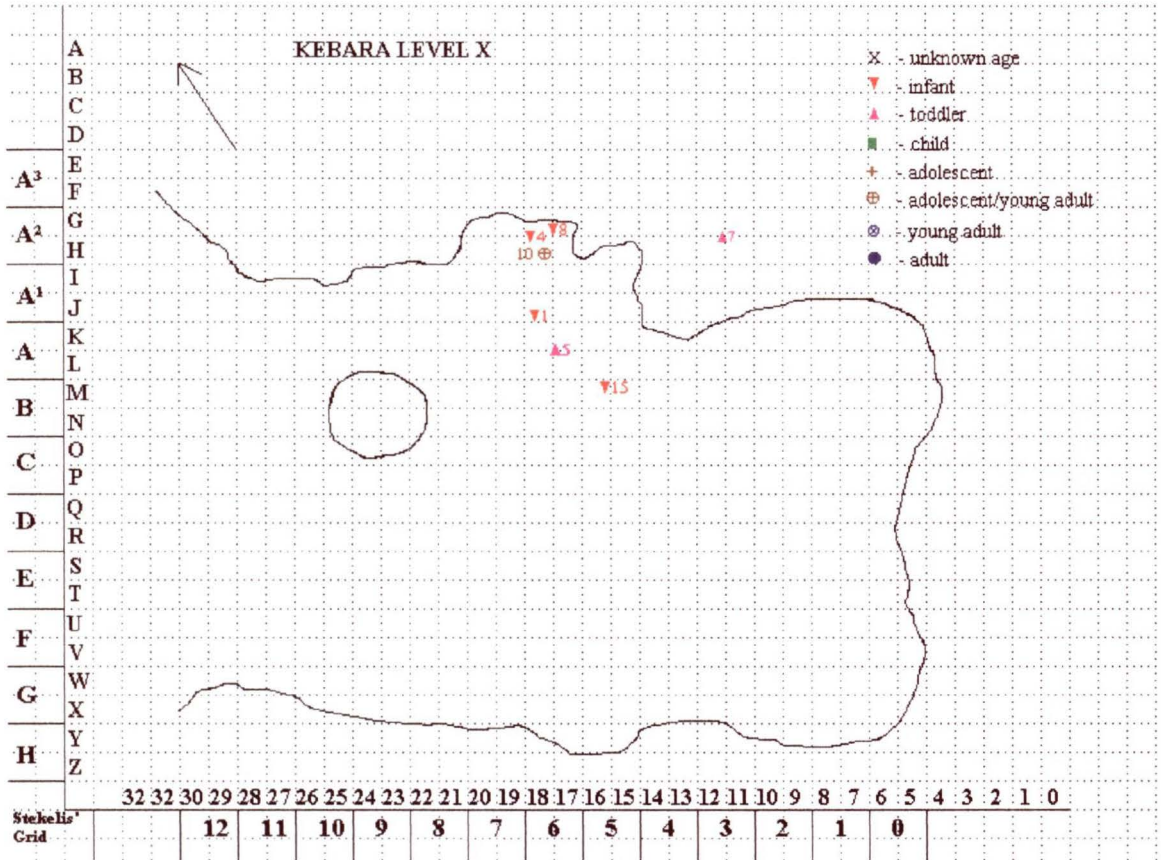


FIGURE A.10: KEBARA UNIT X

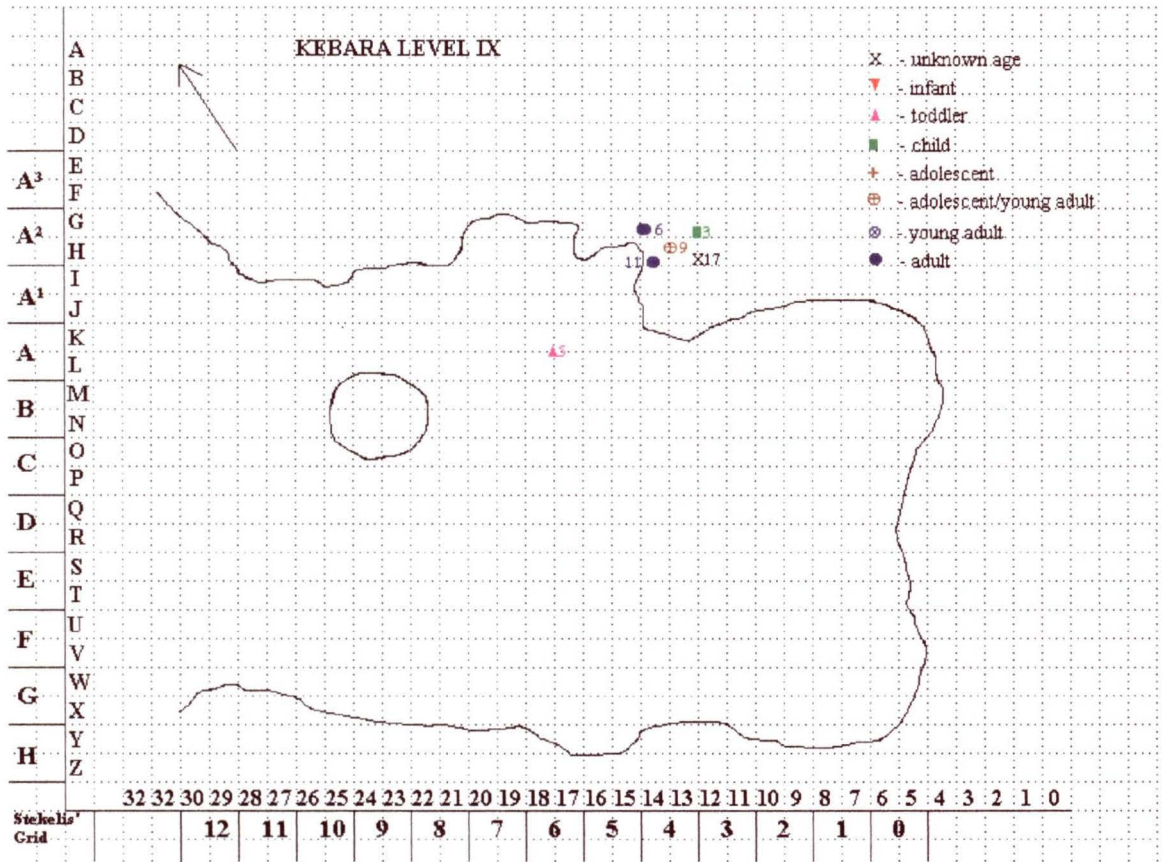


FIGURE A.11: KEBARA UNIT IX

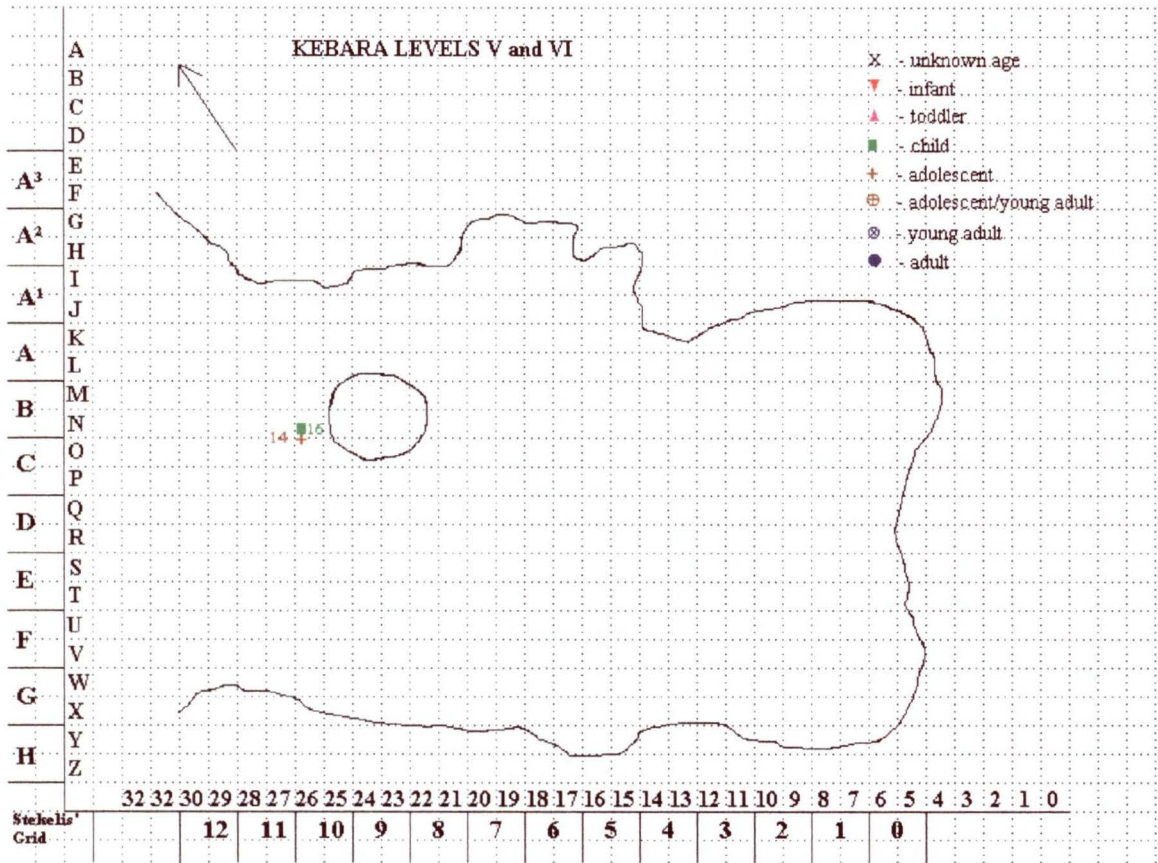


FIGURE A.12: KEBARA UNIT VI/V

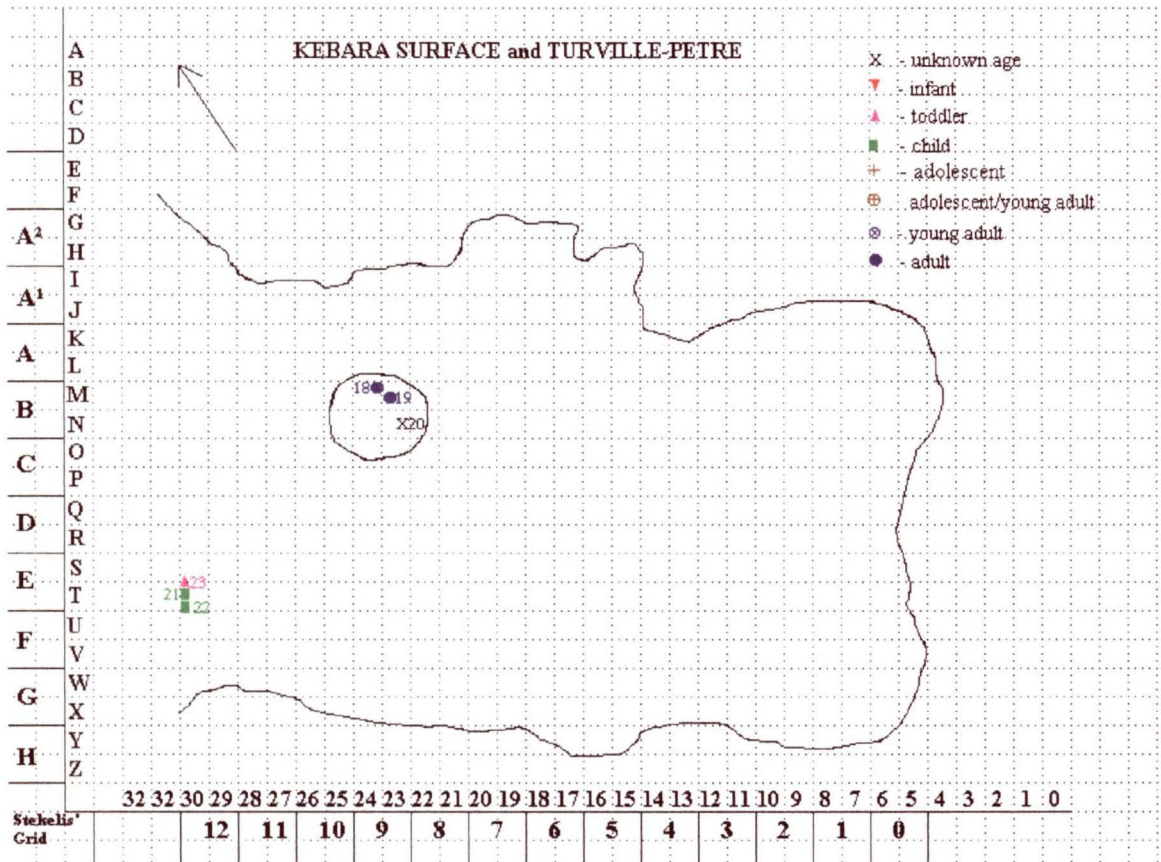


FIGURE A.13: KEBARA SURFACE AND TURVILLE-PETRE SOUNDING

Appendix 2.3: QAFZEH

(pages 515 - 520)

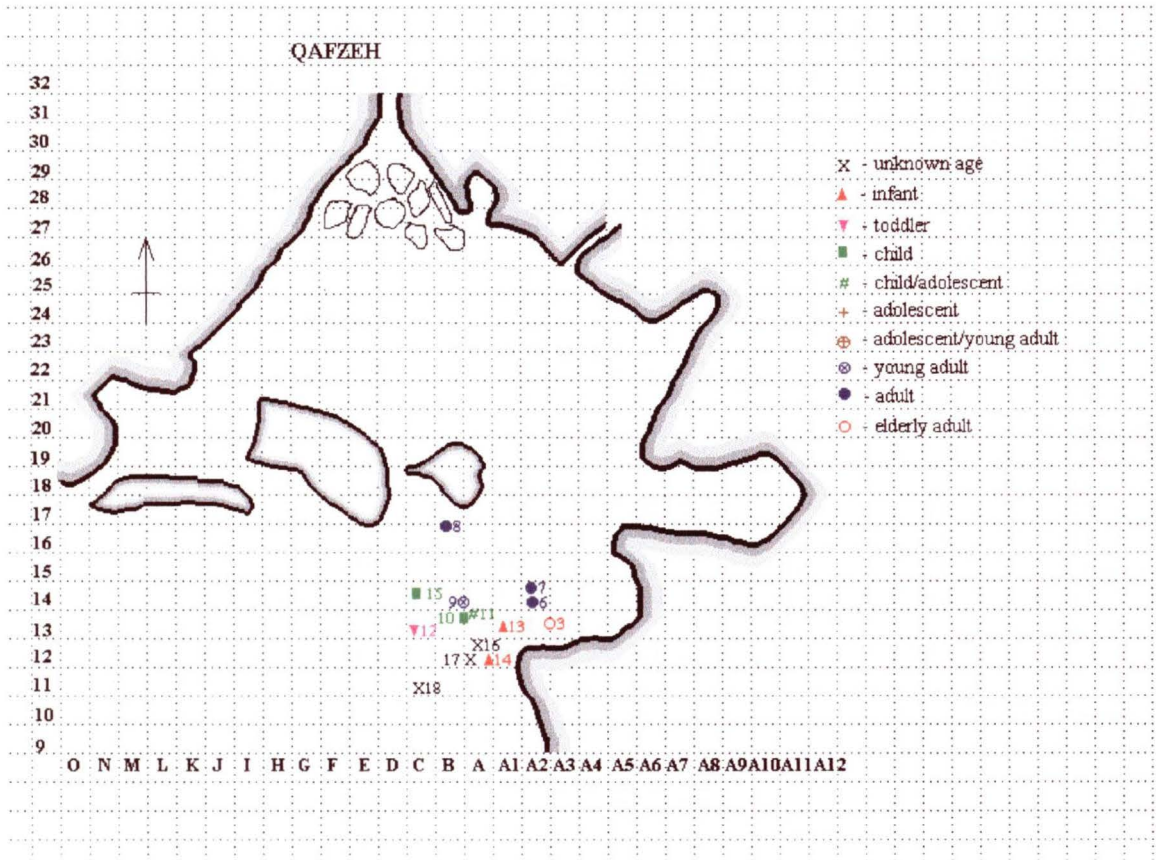


FIGURE A.14: QAFZEH SITE MAP

(Drawn after Vandermeersch 1981:30-33; Defleur 1993:137-151)

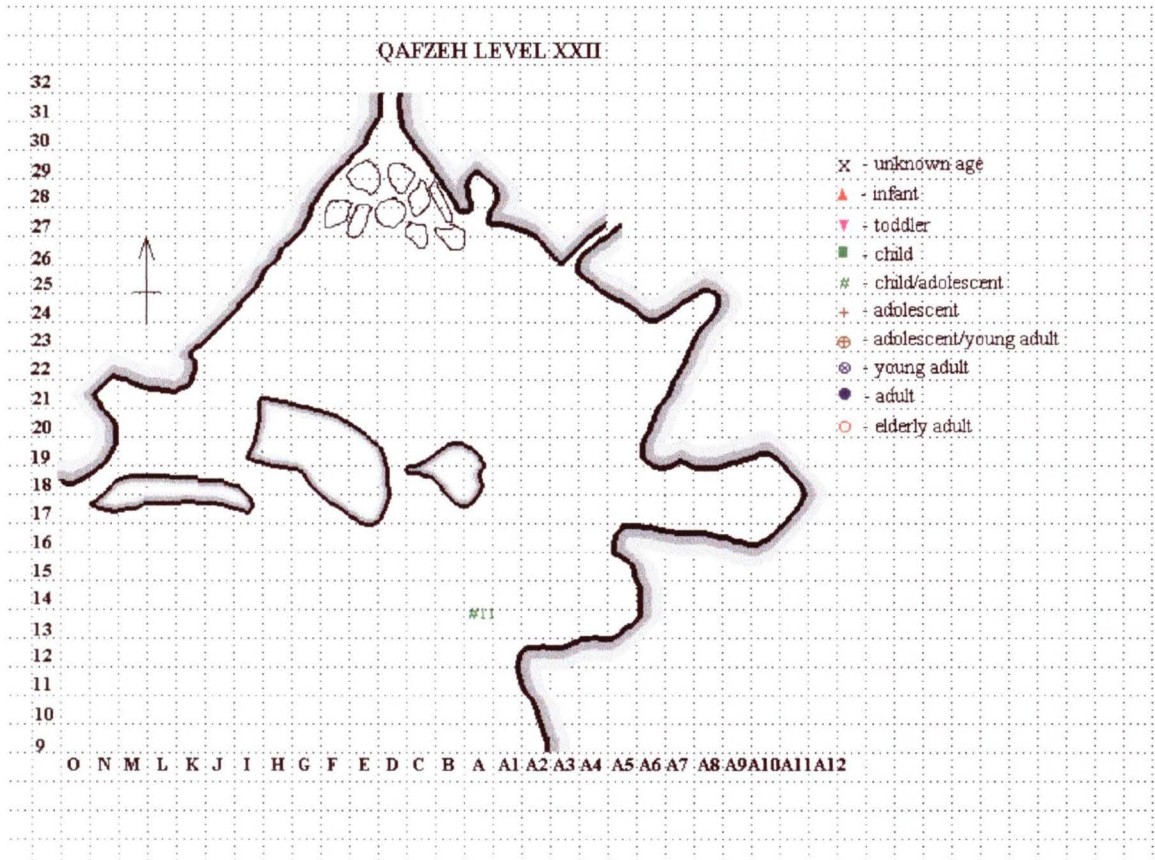


FIGURE A.15: QAFZEH LEVEL XXII

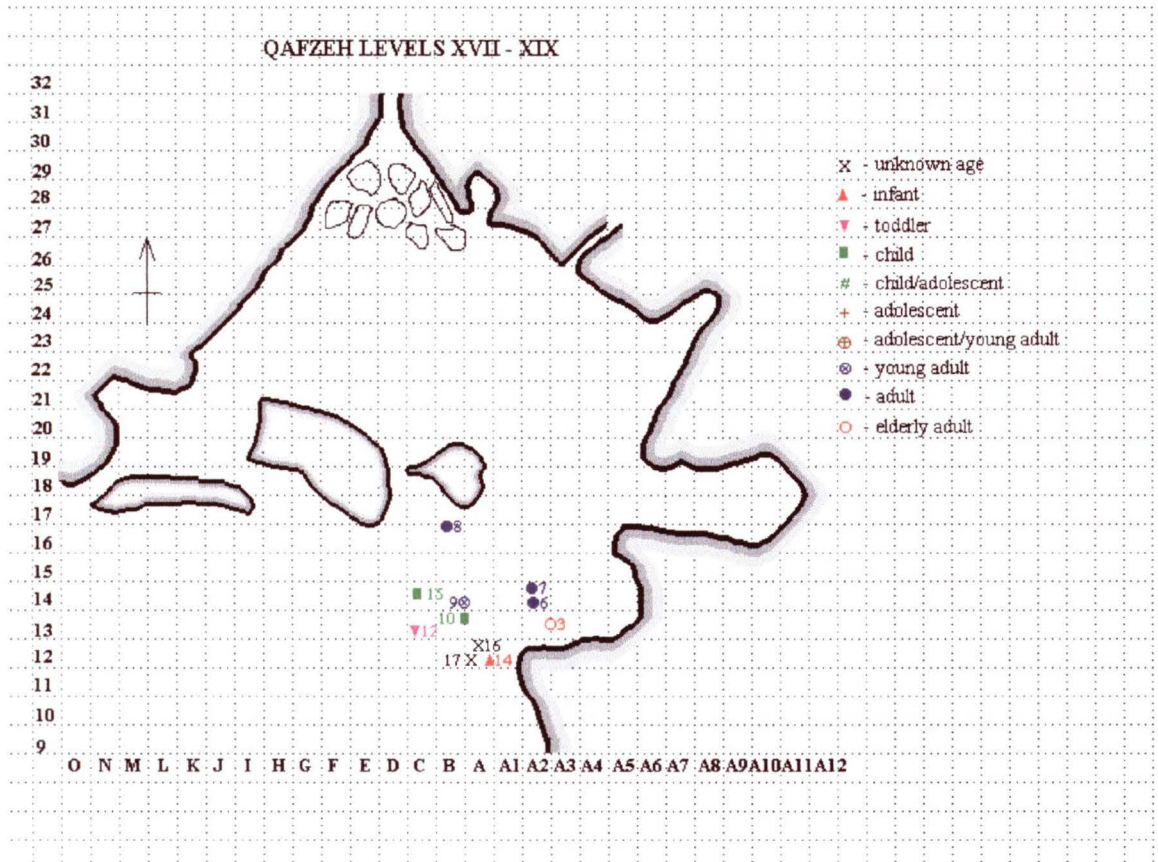


FIGURE A.16: QAFZEH LEVELS XVII - XIX (Neuville and Vandermeersch)

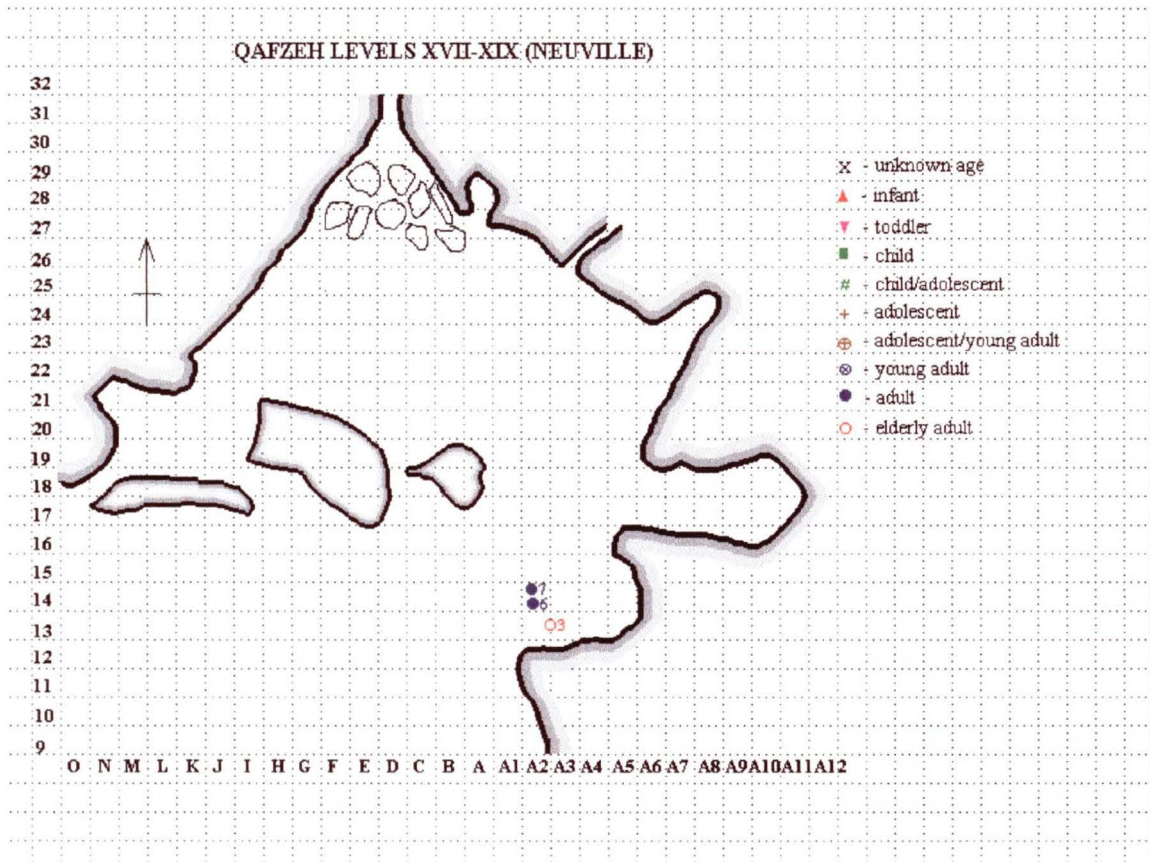


FIGURE A.17: QAFZEH LEVELS XVII - XIX (Neuville)

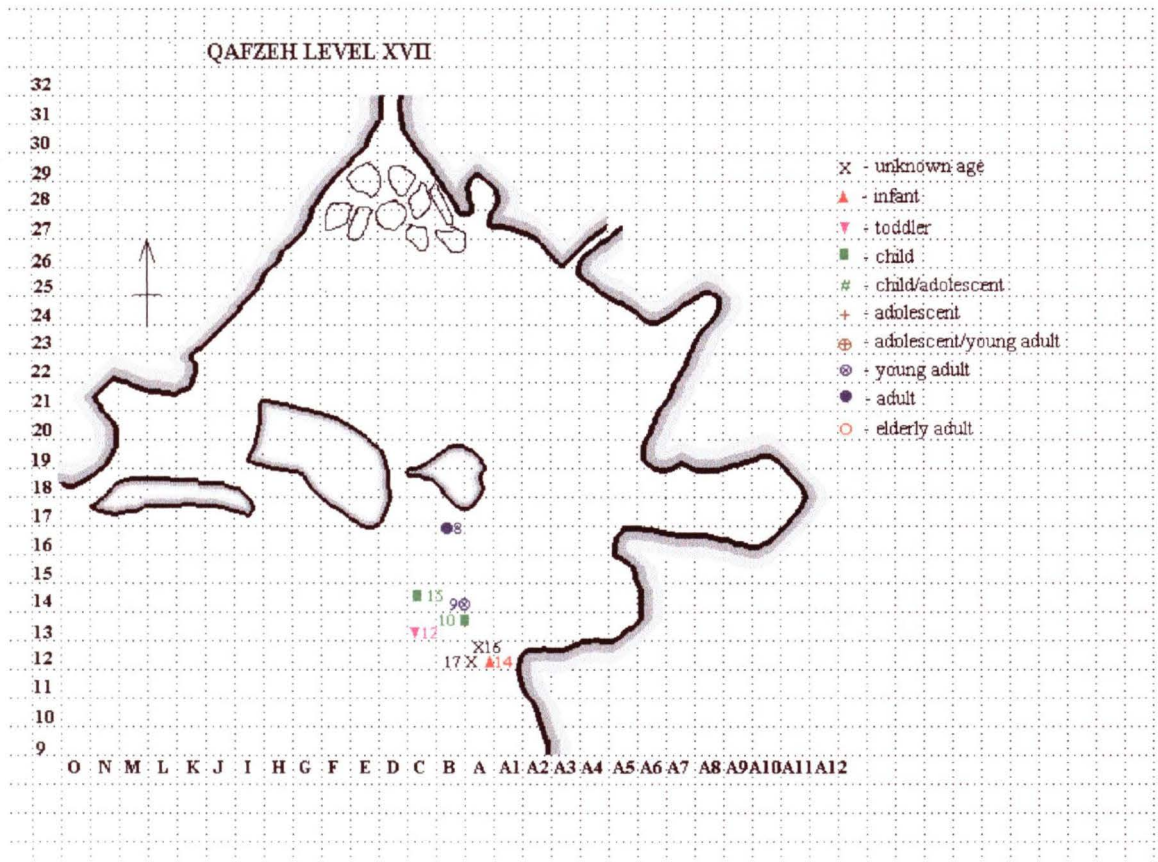


FIGURE A.18: QAFZEH LEVEL XVII (Vandermeersch)

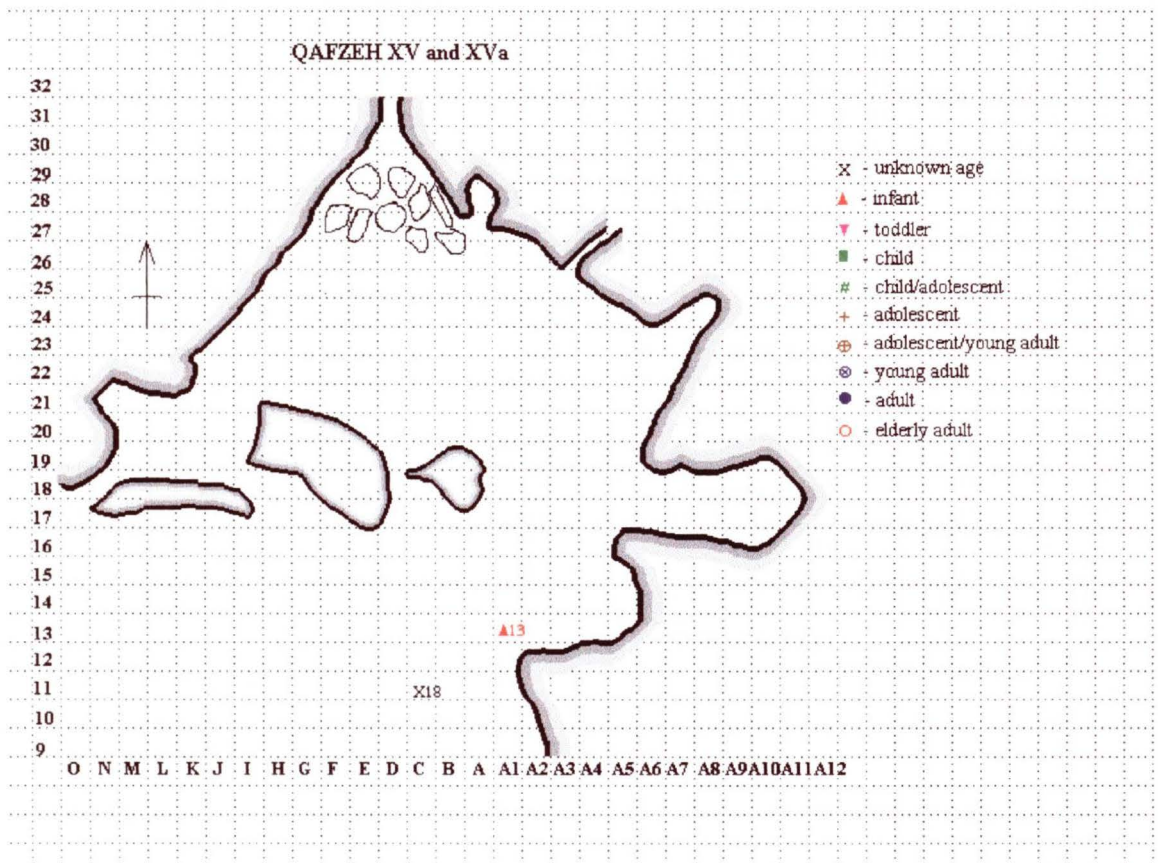


FIGURE A.19: QAFZEH LEVELS XV & XVa

Appendix 2.3: SHANIDAR

(pages 522 - 524)

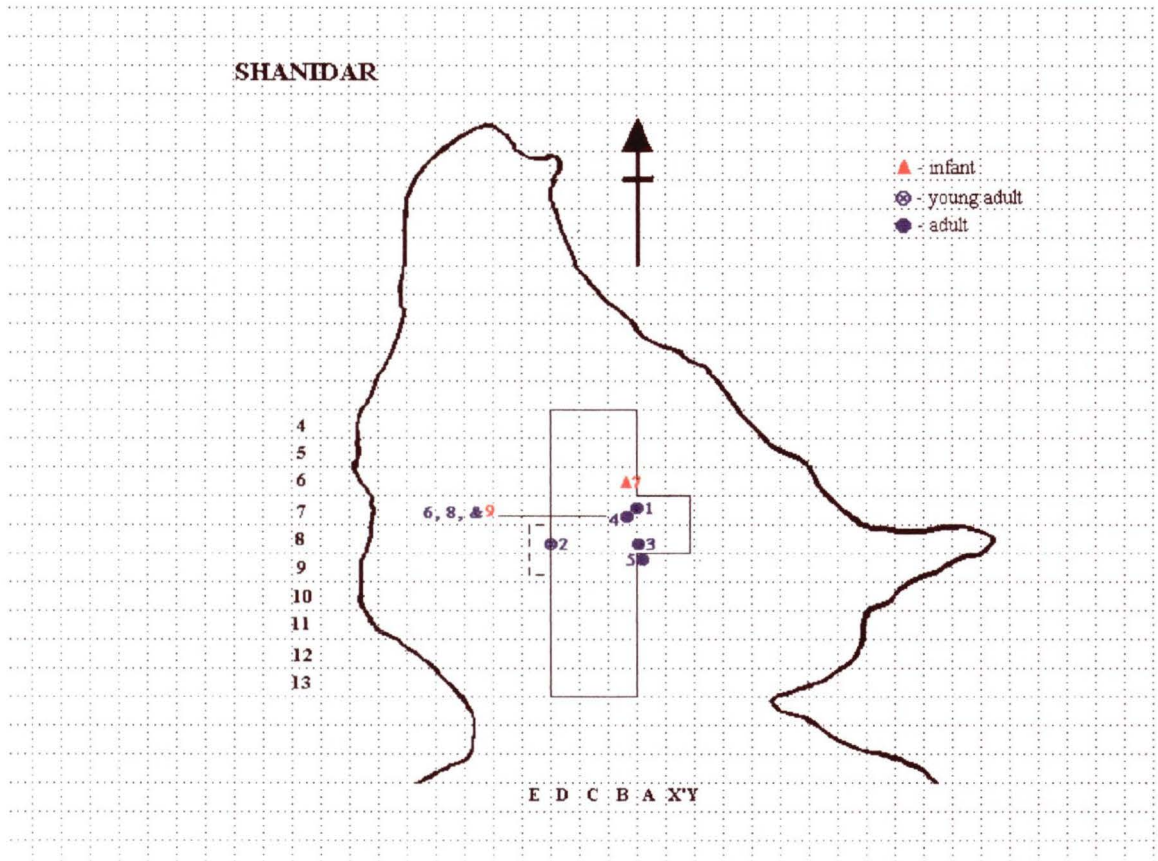


FIGURE A.20: SHANIDAR SITE MAP

(Drawn after Stewart 1977:124; Trinkaus 1983:7)

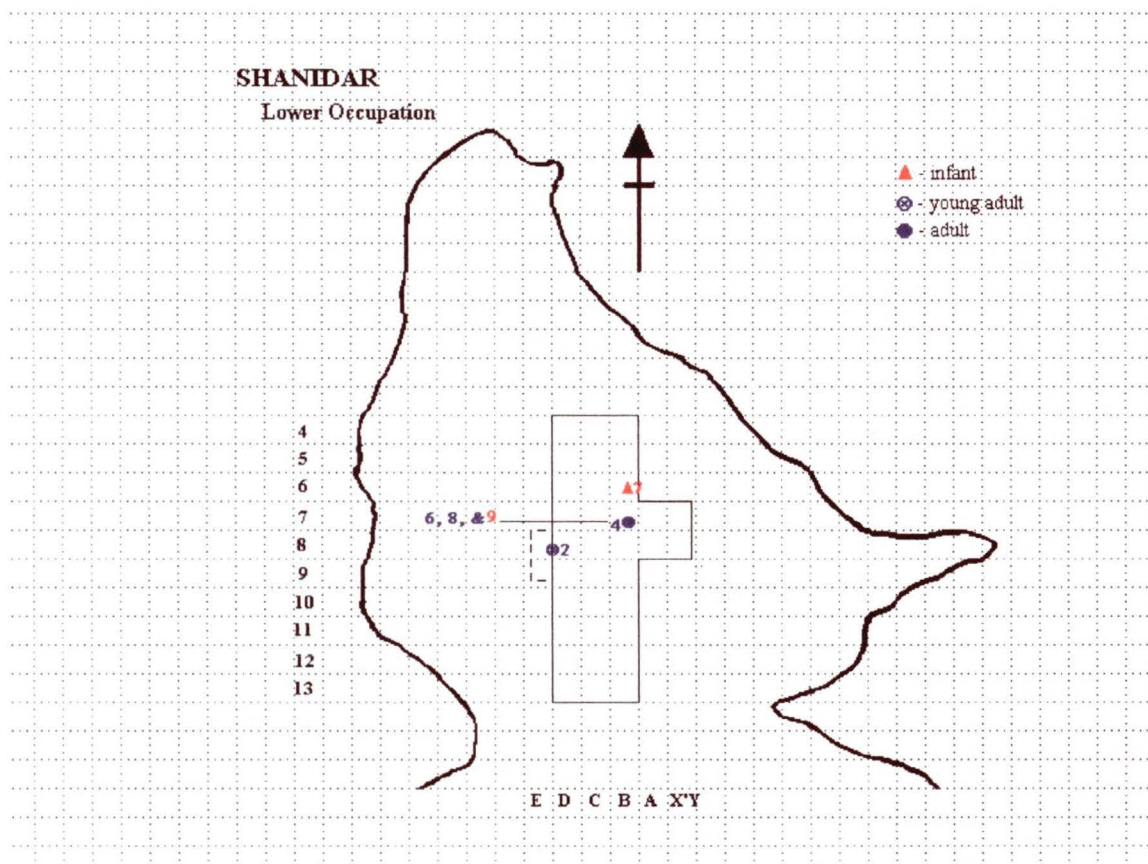


FIGURE A.21: SHANIDAR LOWER OCCUPATION

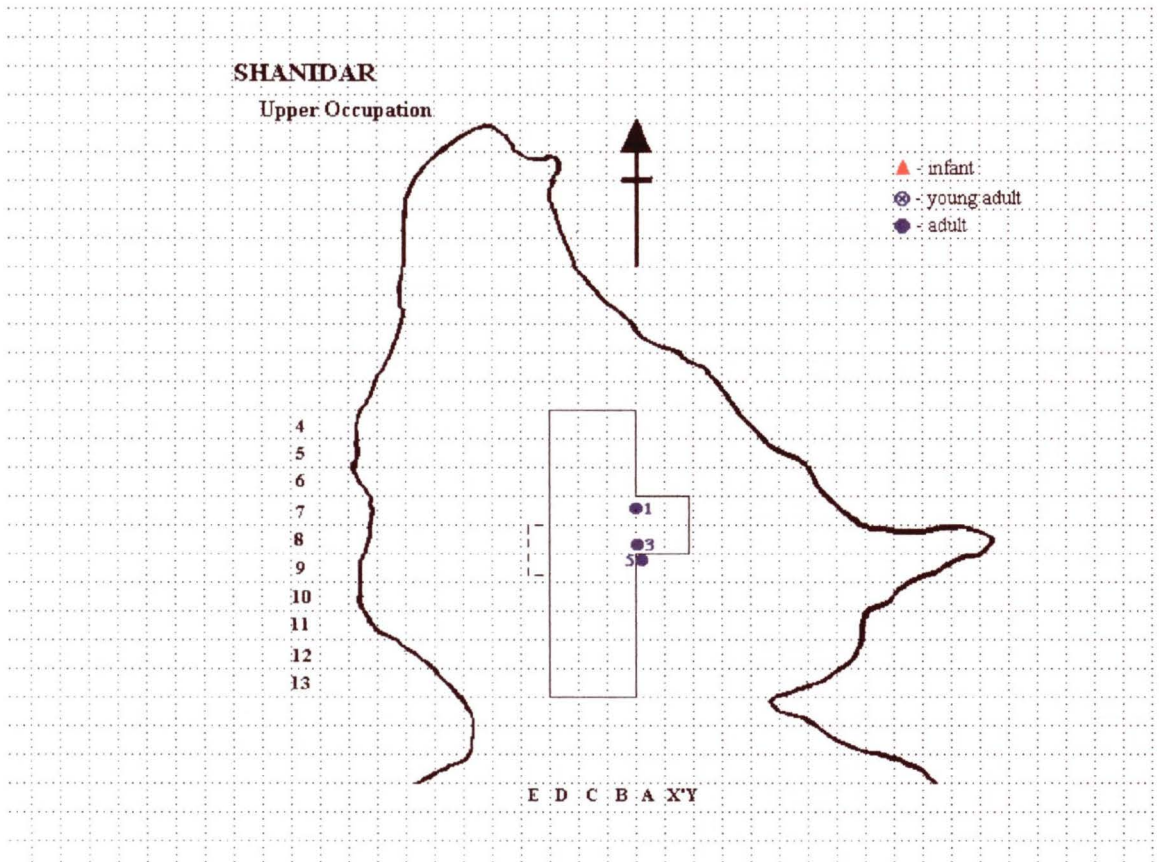


FIGURE A.22: SHANIDAR UPPER OCCUPATION

Appendix 2.5: SKHUL

(page 526)

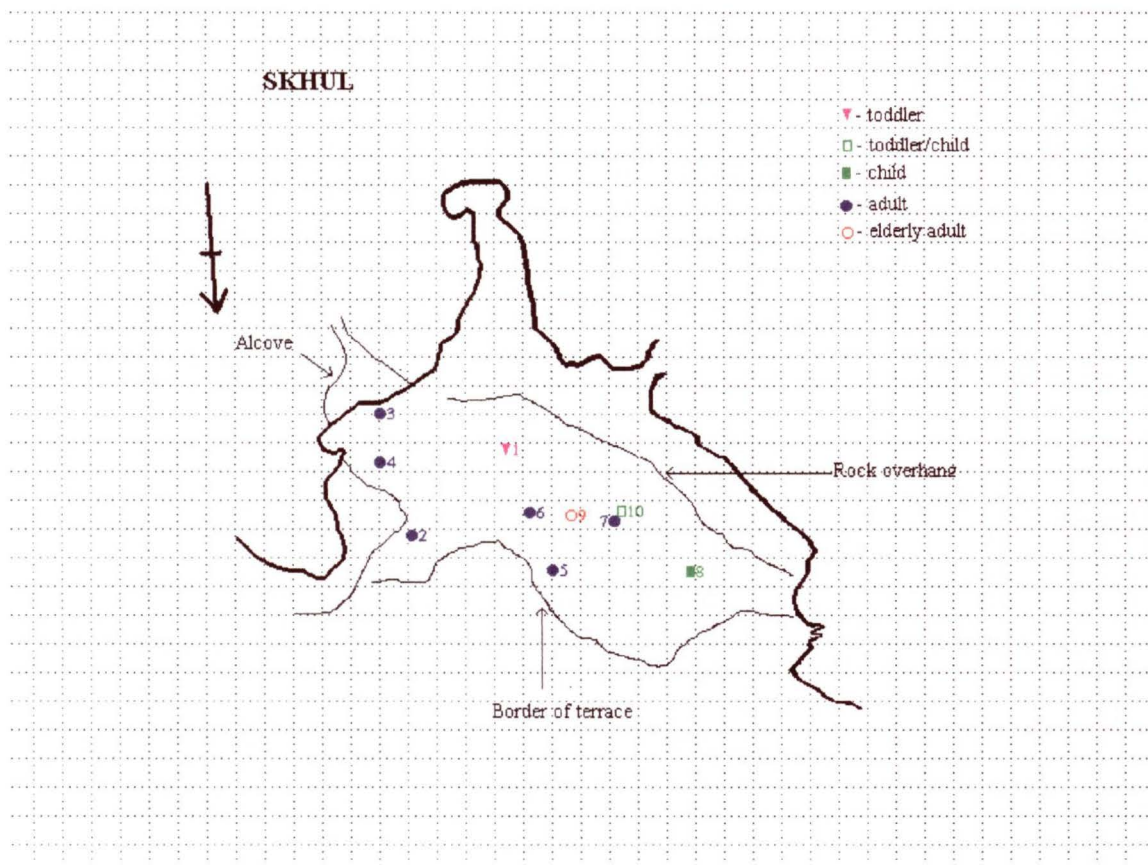


FIGURE A.23: SKHUL SITE MAP

(Drawn after Defleur 1993:124 who drew from Garrod & Bate 1937. Grid inserted by this author.)

APPENDIX 3: BURIAL PATTERNS

Appendix 3.1: AMUD

(page 529)

Amud - Level B2:**Right side: 1**

Infant:

Amud 7 - 10 months

- orientation: northwest-southeast
- head: northwest; right side
- arms: unknown
- legs: unknown

Unknown: 1

Adult:

Amud 9 (?)

- orientation - unknown
- head: unknown; missing
- arms: unknown; missing
- legs: left- unknown position
right - unknown; missing

Amud - Level B1:**Left side: 1**

Adult:

Amud I - Male; 25 years

- orientation - northwest-southeast
- head: northwest; left side; facing east
- arms: left - right angle flex
right - contracted; hand at head height
- legs: left - right angle flex to axis of body; feet near base
of pelvis
right - poorly preserved; displaced

Appendix 3.2: DEDERIYEH 2

(page 531)

Dederiyeh 2 - Level 8:**On Back: 1**

Toddler:

Dederiyeh Infant - 2.5-3 years

- orientation: south-north
- head: south; on back; facing up
- arms: left - slight flex at elbow; extended down
left side
right - extended down right side
- legs: left - right angle flex at knee; femur in line
with body;
right - right angle flex to axis of body; heel
at pelvis; leaned away from body

Appendix 3.3: KEBARA

(page 533)

Kebara - Level XI and XII:**On Back: 1**

Adult:

Kebara 2 - Male; 25-35 years

- orientation: east-west [E.N.E.-W.S.W.]
- head: missing; probably east
- arms: left - flexed across chest; hand at level lumbar
right - flexed across chest; hand at left shoulder
- legs: left - femur extended; lower leg missing
right - missing

Kebara - Level X:**Uncertain Position: 1**

Infant:

Kebara 1 - 7-9 months

- orientation: unknown
- head: unknown
- arms: unknown
- legs: unknown

Appendix 3.4: QAFZEH

(pages 535 - 537)

Qafzeh - Level XXII: 1 burial

On back: 1

Child/adolescent:

Qafzeh 11 - Male; 10-15 years (Tillier 1995:70); 13-14 yrs. (Defleur 1993:141); 12 - 14 yrs. (Defleur 1993:144) [leaning toward right]

- orientation: north-south
- head: north; on base, inclined to right
- arms: left - strongly flexed against trunk; hand - left side of head
right - strongly flexed against trunk; hand - right side of head
- legs: left - (crushed); right angle flex to axis of body; leaning to right side; heel near pelvis
right - (crushed); right angle flex to axis of body; leaning to right side; heel near pelvis

Qafzeh - Level XVII: 4 burials

Left side: 1

Young Adult:

Qafzeh 9 - Female; 18-20 years

- orientation: north-south
- head: north; left side; facing east
- arms: left - flexed and crossed over abdomen
right - flexed and crossed over abdomen
- legs: left - semi-flexed; leaning to left
right - semi-flexed; leaning to left

Back: 2

Child:

Qafzeh 15 - 5 years (Tillier 1995:70)); 8-10 years (Defleur 1993:141)

- orientation: southeast-northwest (Defleur 1993:149); southwest-northeast (Vandermeersch 1981:33)
- head: to south (either southeast or southwest); right side
- arms: unknown
- legs: missing with lower trunk

Qafzeh 10 - 5 yrs. (Tillier 1995:70); 6 years (Defleur 1993:141) [leaning slightly on left side];
body strongly flexed on itself

- orientation: east-west
- head: east; on base
- arms: left - bent; hand tucked under head
right - parallel to body
- legs: left - right angle or less flex to axis of body; leaning left; foot missing
right - right angle or less flex to axis of body;
leaning left; foot missing

Right Side: 1

Adult:

Qafzeh 8 - Male; < 50 years

- orientation: east to west
- head - east; inclined on trunk - deepest part of pit
- arms: left - extended down length of body
right - extended down length of body
- legs: left - semi-flexed
right - semi-flexed

Qafzeh - Level XVII - XIX: 3 burials

Left Side: 1

Elderly Adult

Qafzeh 3: Female; 30-50 years

- orientation: unknown
- head: unknown
- arms: unknown
- legs: almost extended

Unknown: 1

Adult:

Qafzeh 7: unknown sex; <50 years

- orientation - unknown
- head - unknown
- arms - unknown
- legs - unknown

Secondary ? : 1

Adult

Qafzeh 6: Male; 20-40 years

- jumbled mass of bones
- head - left side

Appendix 3.5: SHANIDAR

(pages 539 - 541)

Shanidar - Layer D: Lower occupation

Left side: 1, possibly 2

Adult:

Shanidar IV - Male; 30-45 years

- orientation: southeast-northwest
according to burial plan (Solecki 1971:245}); (south-north)
- head: southeast [south]; left side; facing west
- arms: left - flexed; hand at level of face
right - flexed; hand at level of left forearm
near elbow
- legs: left - right angle or less flex to axis of body; heel at
pelvis
right - right angle or less flex to axis of body; heel
at pelvis

Shanidar VI - Female; 20-35 years

- orientation: southeast-northwest [?]
- head: uncertain
- arms: unknown; one humerus found near head of
Shanidar IV
- legs: both semi-flexed; legs south in block of
Shanidar; feet central in box

Right side (Trinkaus 1983:28): 1

Infant: [Possibly on back? or right side of back?]

Shanidar VII - undetermined sex; 8-9 months [strongly bent or
flexed]

- orientation: north-south
- head: north; on back of head; looking up
- arms: left - poorly conserved; flexed leaning right
right - poorly conserved; flexed leaning
right; hand closed, palm up
- legs: left - approaching right angle to axis of body;
leaning right; knee up originally? (Defleur
1993:68; Solecki 1971:137)
right - approaching right angle to axis of body;;
leaning right; knee up originally? (Defleur
1993:68; Solecki 1971:137)

Uncertain position: 3

Infant:

Shanidar IX - 6-12 months [only vertebrae recovered]

- orientation: unknown
- head: unknown; not recovered
- arms: unknown; not recovered
- legs: unknown; not recovered

Young Adult:

Shanidar II - Male; 20-30 years

- orientation: uncertain; head south resting on vertebral column; chin north
- head: south; chin north; right side; facing east; vertebral column twisted around cranium
- arms: unknown
- legs: unknown

Shanidar VIII - Female

- orientation: unknown
- head: unknown
- arms: unknown
- legs: unknown

Shanidar - Level D: Upper occupation**Back: 1**

Adult:

Shanidar 1 - Male; 30-45 years [on right side of back]

- orientation: west-east
- head: west; on base; facing south-southeast
- arm: left - humerus parallel to body; hand and forearm on chest
- right - humerus parallel to body; forearm and hand missing [amputation?]
- legs: left - fully extended
- right - fully extended

Right side: 1

Elderly Adult:

Shanidar III - Male; >40 years

- orientation: east to west ?; upper limbs to east; lower limbs to west
- head: unknown; missing
- arms: left - at angle; to east
right - at angle; to east
- legs: left - flexed against trunk [probably right angle or less flex to axis of body]; to west
right - flexed against trunk [probably right angle or less flex to axis of body]; to west

On knees: 1

Elderly Adult:

Shanidar V - Male; 35-50 years [killed in rockfall; buried as found]

- orientation - unknown; body contracted on knees
- head - body bent backward; head near pelvis due to rockfall [?]
- arms: left - flexed; hands on knees
right - flexed; hands on knees
- legs: left - folded under body
right - folded under body

Appendix 3.6: SKHUL

(page 543 - 545)

Skhul - Level B:

On knees: 1

Toddler:

Skhul I - Female (Tillier 1995); Male (McCown 1939);
2.0-4.5 years; [leaning slightly on left side]

- orientation: south-north [knees south, buttocks north]
- head: uppermost in burial
- arms: left - flexed; hand under head
right - unknown
- legs: left - right angle flex to axis of body; lower leg next to thigh; feet under buttocks
right - right angle flex to axis of body; lower leg next to thigh; feet under buttocks

On back: 1

Adult:

Skhul V - Male; 30-40 years; leaning slightly to right

- orientation: west-east [west southwest-east northeast]
- head: west [west southwest]; on base; looking toward valley
- arms: left - crossing body; humerus parallel to right; hand under right elbow
right - slightly away from body; forearm strongly flexed; hand at head height
- legs: left - approximate right angle flex to axis of body; heel at buttocks; pelvis: rotated to right
right - approximate right angle flex to axis of body; heel at buttocks; pelvis rotated to right

On right side: 3

Adult:

Skhul IV - Male; 40-50 years

- orientation: east-west [southeast-northwest]
- head: east [southeast]; on base; looking northeast toward valley
- arms: left - strongly flexed; palm up; fingers under mandible
right - flexed; slightly up and in front of left hand; wrist in supination
- legs: left - right angle flex to axis of body; lower leg against thigh
right - right angle flex to axis of body; lower leg against thigh

Skhul VII - Female; 35-40 years

- orientation: east-west
- head: east; on right side; facing northeast toward valley
- arms: left - forearm flexed at right angle to humerus; hand brought back to face
right - under left, forearm flexed at right angle to humerus; hand slightly in front of left
- legs: left - unknown
right - tight flex? [at least right angle]; femur parallel to and pressed against tibia

Elderly Adult:

Skhul IX - Male; 50 years

- orientation: east-west ?;
- head: head in east position; on right side angled toward pelvis; occipital pointed northwest, facing southeast
- arms: left: missing
right: missing, except for right hand bone
- legs: left - femur articulated to pelvis
right - missing

Unknown position: 5

Toddler/Child:

Skhul X - probably Male; 4.0-5.5 years [possibly disturbed by removal of Skhul VII]

- orientation: unknown
- head: unknown
- arms: unknown
- legs: unknown

Child:

Skhul VIII - probably Male; 8 - 10 years

- orientation: unknown
- head: missing
- arms: missing
- legs: left: tibia and tarsal bones obliquely placed
to left
- right: lightly flexed at knee

Adult:

Skhul II - Female; 30-40 years [no order to remains, 7 elements]

- orientation: no order
- head: unknown
- arms: unknown
- legs: unknown

Skhul III - Male; [3 articulated elements]

- orientation: unknown
- head: missing
- arms: missing
- legs: left - contracted; in deepest part of deposits
right - missing

Skhul VI - Male; 30-35 years [articulation left leg]

- orientation: unknown
- head: unknown [fragments recovered]
- arms: unknown [left side only]
- legs: left - probably strongly flexed [perhaps right angle
flex to body]
- right - missing

Appendix 3.7: TABUN

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Tabun - Level C [?]:**On back:**

Adult:

Tabun C1 - Female; approximately 30 years [leaning slightly to left]

- orientation: east-west
- head: east; on base;
- arms: left - forearm at right angle to left away from body
right - along right side; hand on pelvis
- legs: left - slightly separated from right; semi flexed; leaning left
right - slightly separated from left; slightly flexed; leaning left

APPENDIX 4: BURIAL DIAGRAMS

Appendix 4.1: AMUD

(pages 550 - 551)

FIGURE A.24: AMUD I

(Facsimile drawn from Sakura 1970:120, Fig. VII-2)

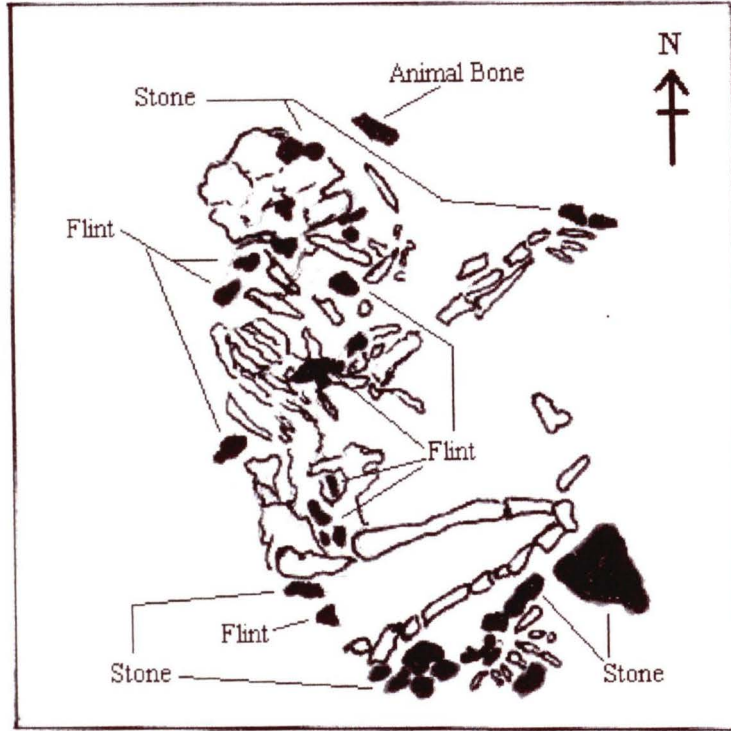


FIGURE A.25: AMUD 7

(Facsimile drawn from photo in Rak, Kimbel, & Hovers 1994:316, Figure 2).

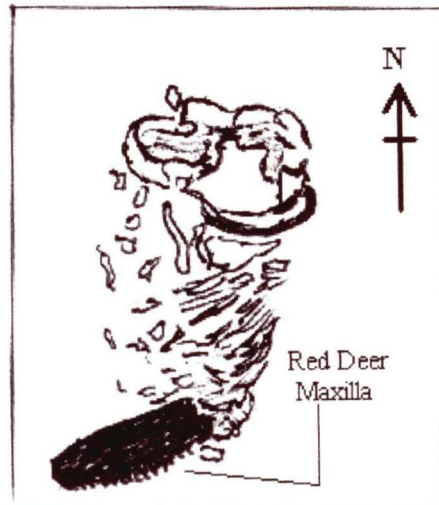
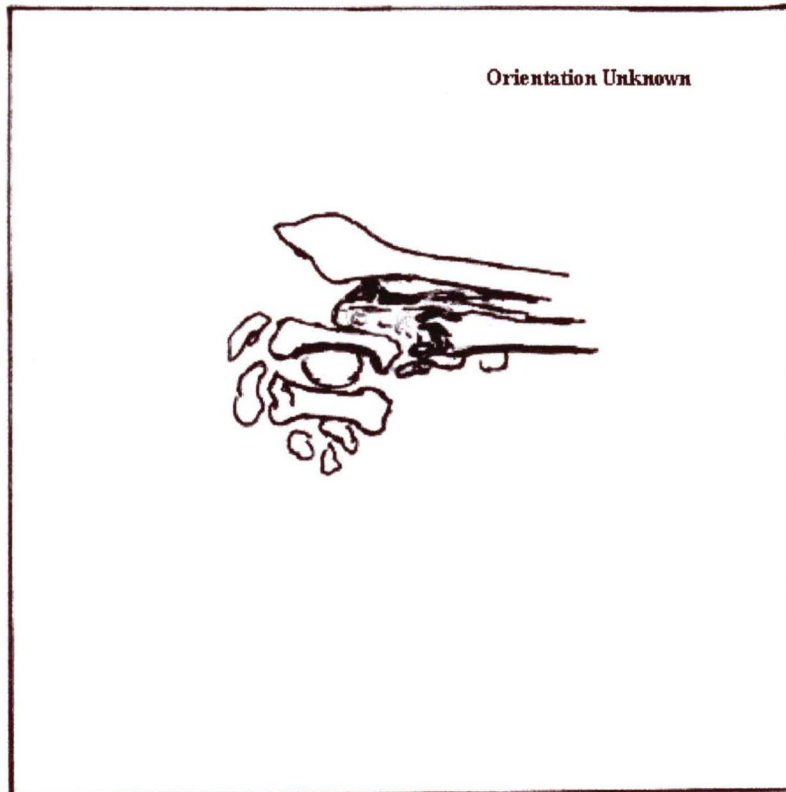


FIGURE A.26: AMUD 9

(Facsimile drawn from photo in Hovers, Rak, Lavi, & Kimbel 1995:53, Fig. 3).

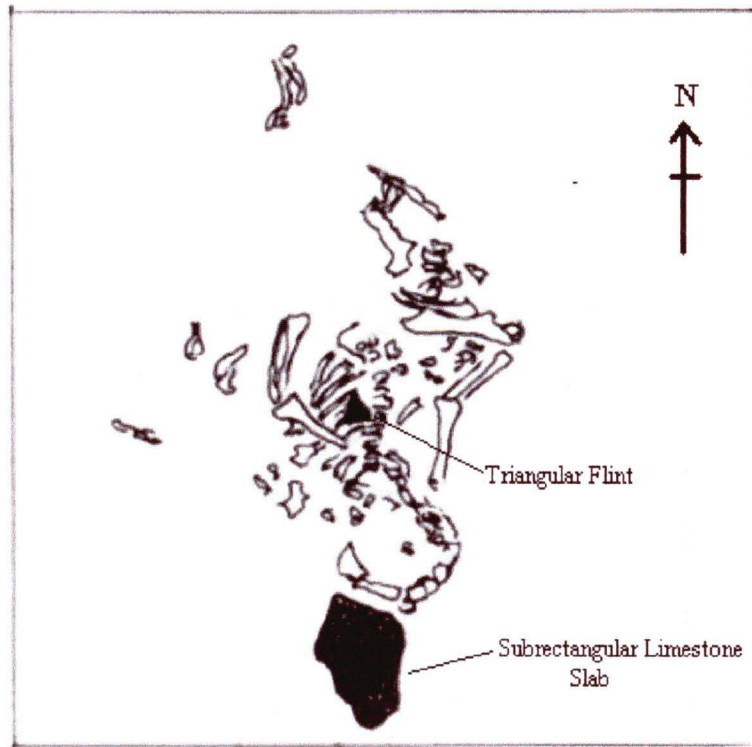


Appendix 4.2: DEDERIYEH 2

(Page 553)

FIGURE A.27: DEDERIYEH INFANT

(Facsimile drawn from Akazawa, Muhesen, Dodo, Kondo, Mizoguchi, Abe, Nishiaki, Ohta, Oguchi, & Haydal 1995:80, Fig. 5)

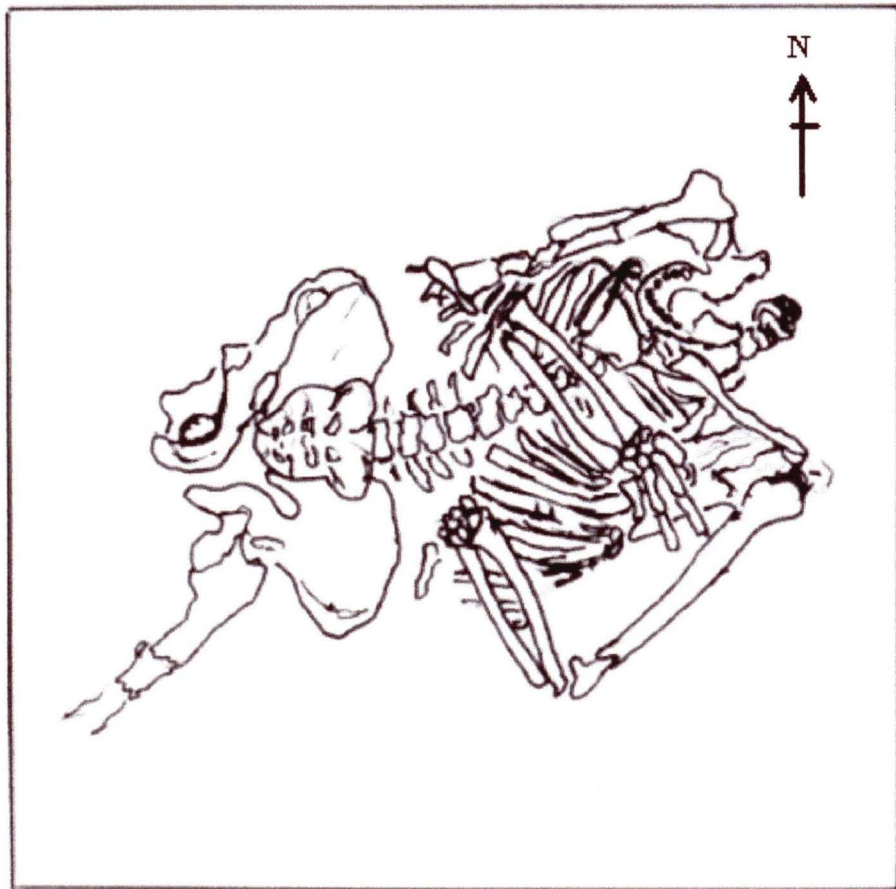


Appendix 4.3: KEBARA

(page 555)

FIGURE A.28: KEBARA 2

(Facsimile drawn from Arensburg, Bar Yosef, Chech, Goldberg, Laville, Meignen, Rak, Tchernov, Tillier, & Vandermeersch, presented by Piveteau 1985:229)



Appendix 4.4: QAFZEH

(pages 557 - 558)

FIGURE A.29: Qafzeh 9 and 10

(Facsimile drawn from Tillier 1995:71, Fig. 7. Tillier followed D. Visset in Vandermeersch 1981)

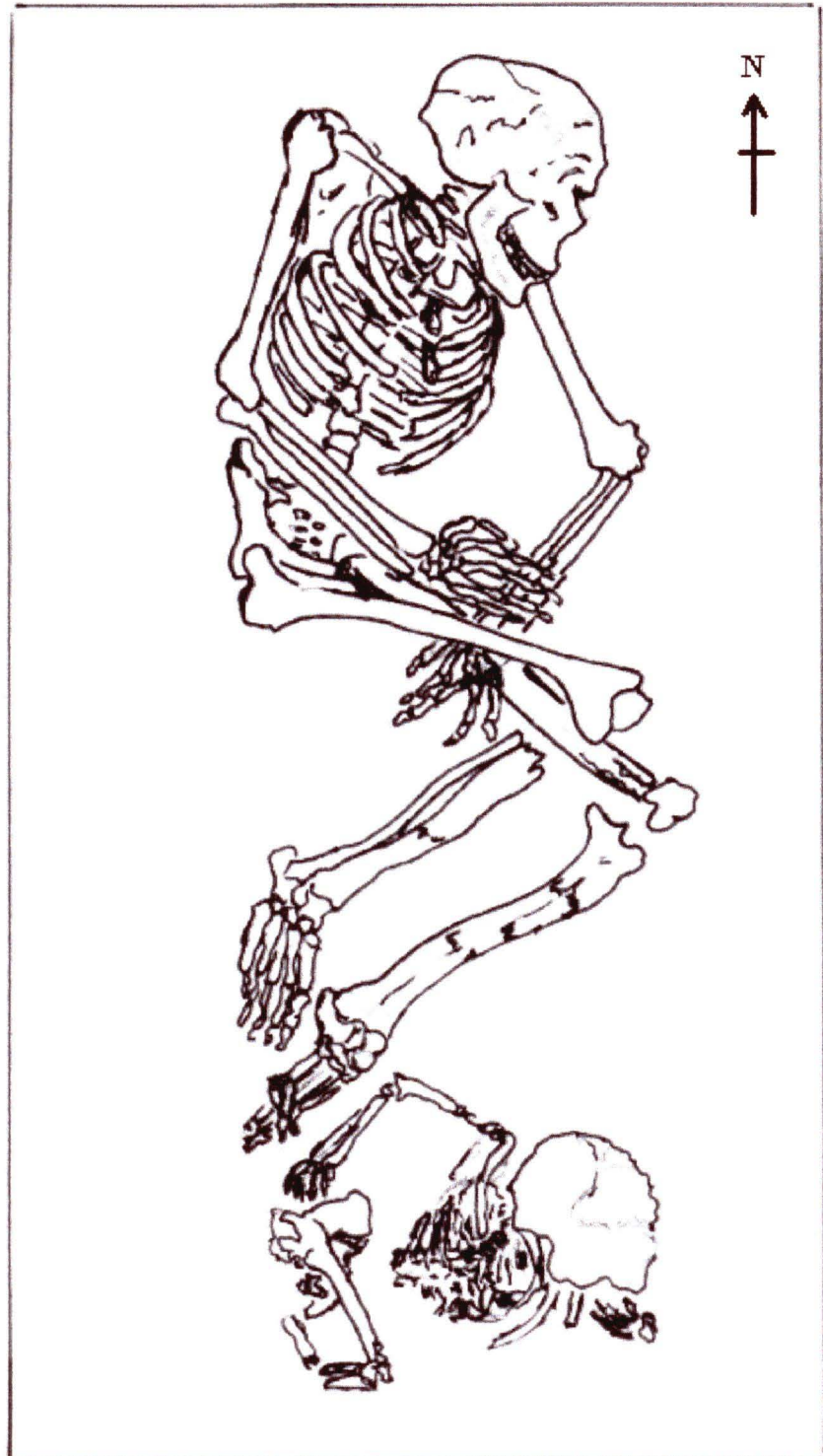
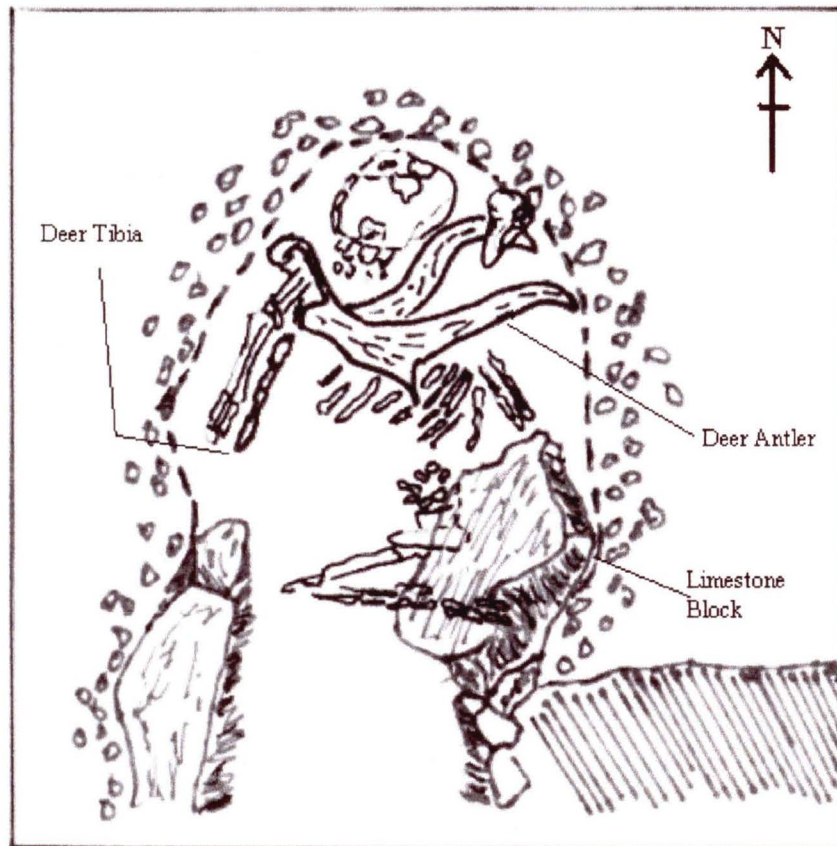


FIGURE A.30: QAFZEH 11

(Facsimile drawn from Defleur 1993:147, Fig.41. Defleur followed Vandermeersch 1981).



Appendix 4.5: SHANIDAR

(pages 560- 562)

FIGURE A.31: SHANIDAR 1 (*In situ*)

(Facsimile drawn from Defleur 1993:154, Fig. 46. Defleur followed Solecki 1961 in “Three adult Neandertal skeletons from Shanidar Cave” in *Sumer* 17:71-96).

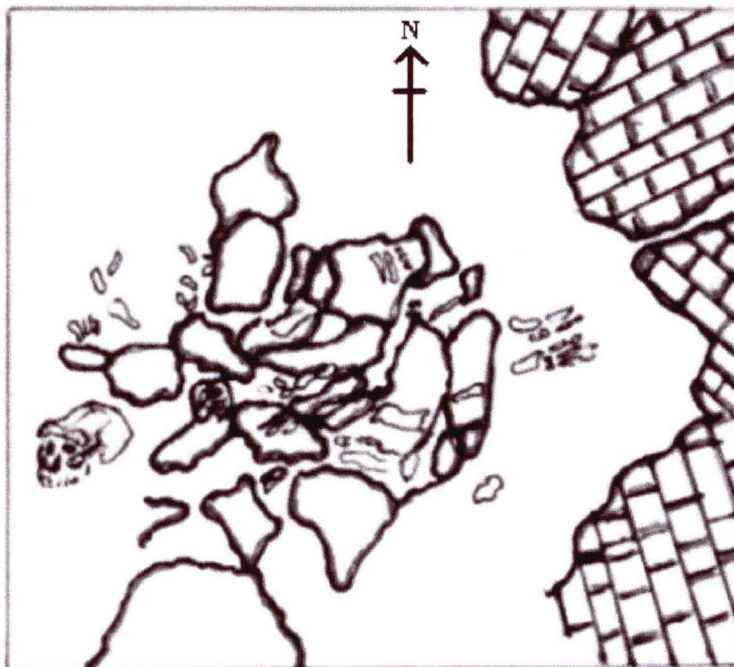


FIGURE A.32: SHANIDARI (burial plan)

(Facsimile drawn from Solecki 1971:194, fig. 4)

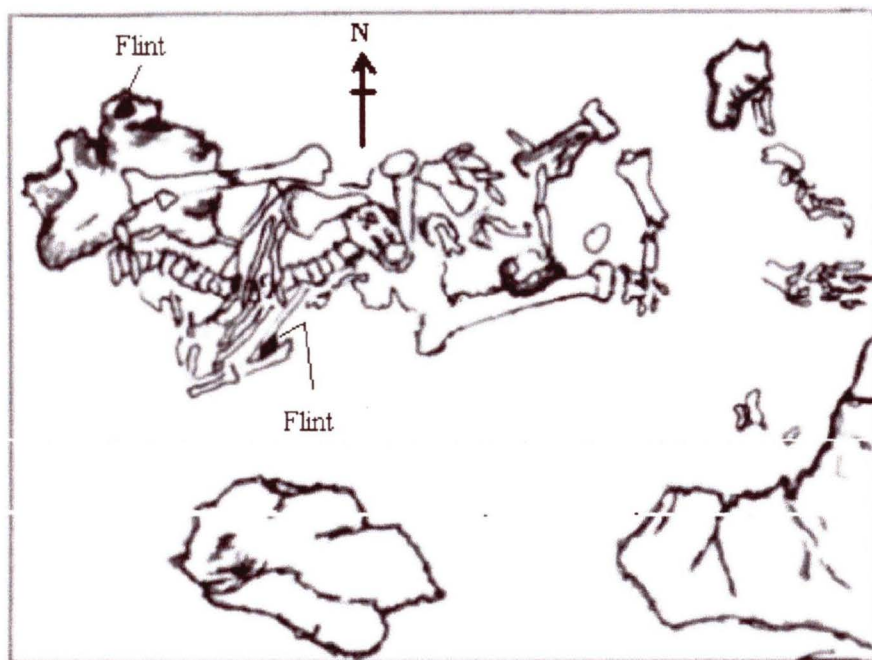
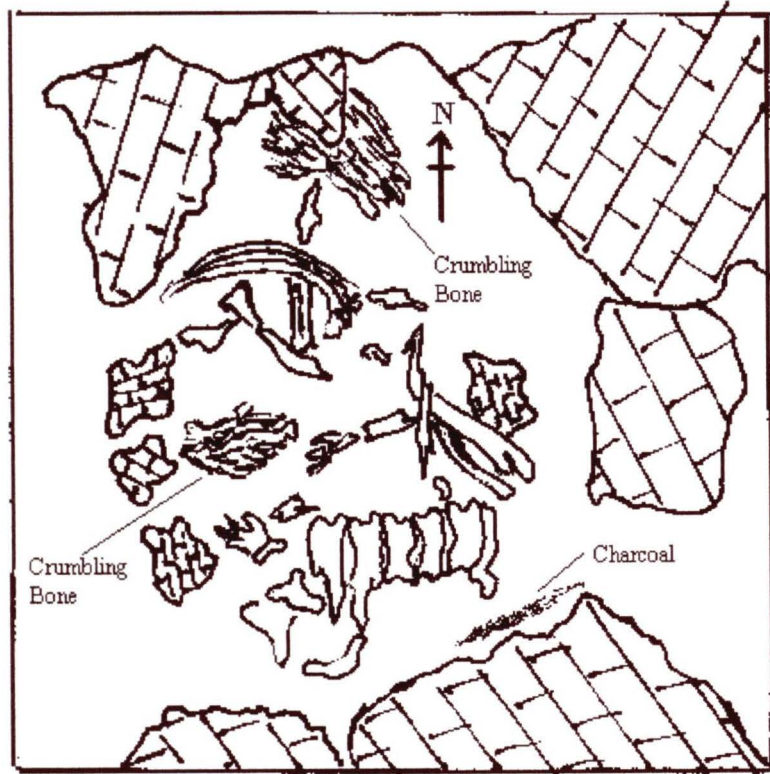


FIGURE A.33: SHANIDAR III

(Facsimile drawn from Solecki 1971:208, Fig. 6 and Defleur 1993:160)

**FIGURE A.34: SHANIDAR IV**

(Facsimile drawn from Solecki 1971:245, Fig. 7).

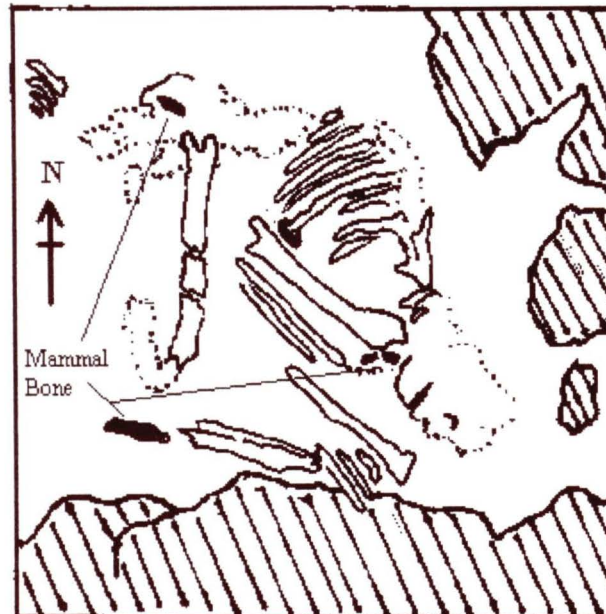


FIGURE A.35: SHANIDAR 7

(Facsimile drawn from photo in Solecki 1971:136)

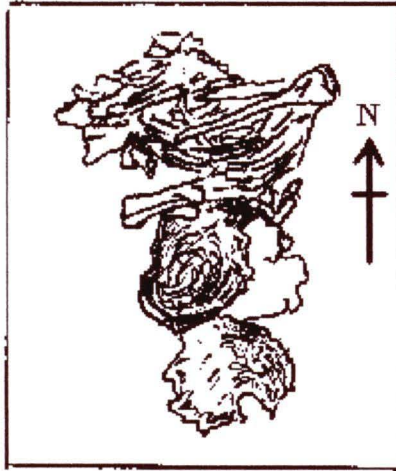


Appendix 4.6: SKHUL

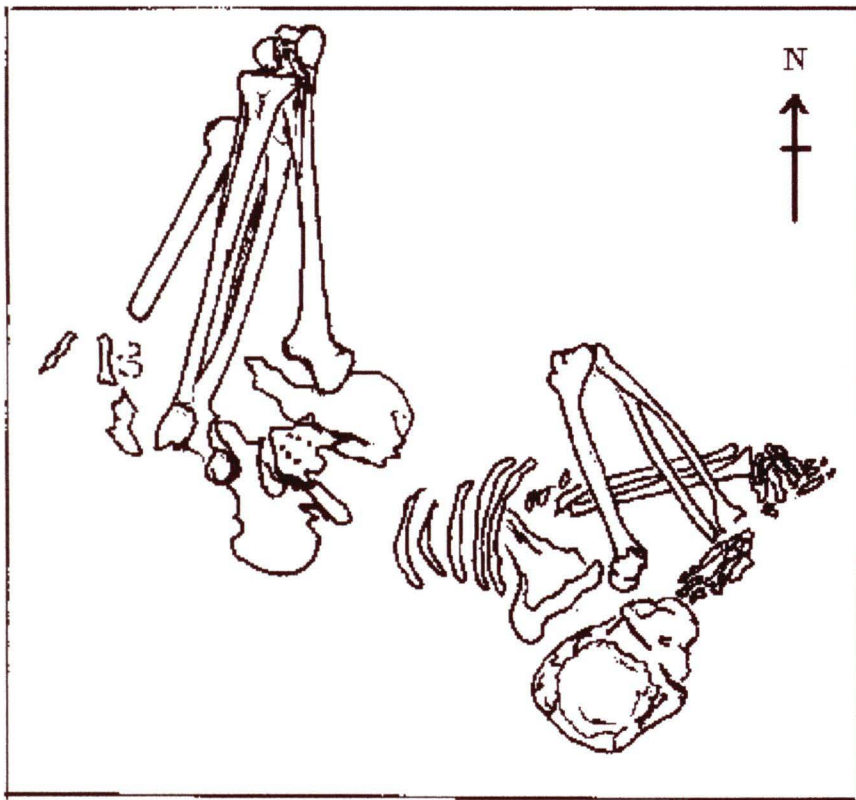
(pages 564 - 565)

FIGURE A.36: SKHUL 1

(Facsimile drawn from Tillier 1995:68, Fig.5. Tillier followed McCown and Keith 1939, fig. 214).

**FIGURE A.36: SKHUL IV.**

(Facsimile drawn from Defleur 1993:129, Fig. 32. and Garrod and Bate 1937).



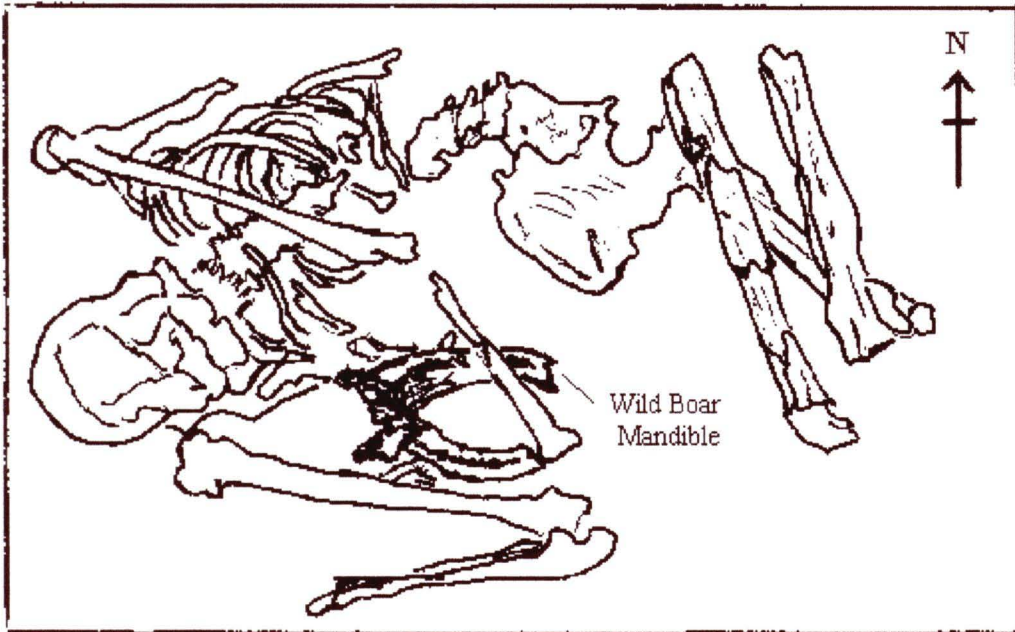


FIGURE A.38: SKHUL V

(Facsimile drawn from Defleur 1993:131, Fig.34 and Garrod & Bate 1937).

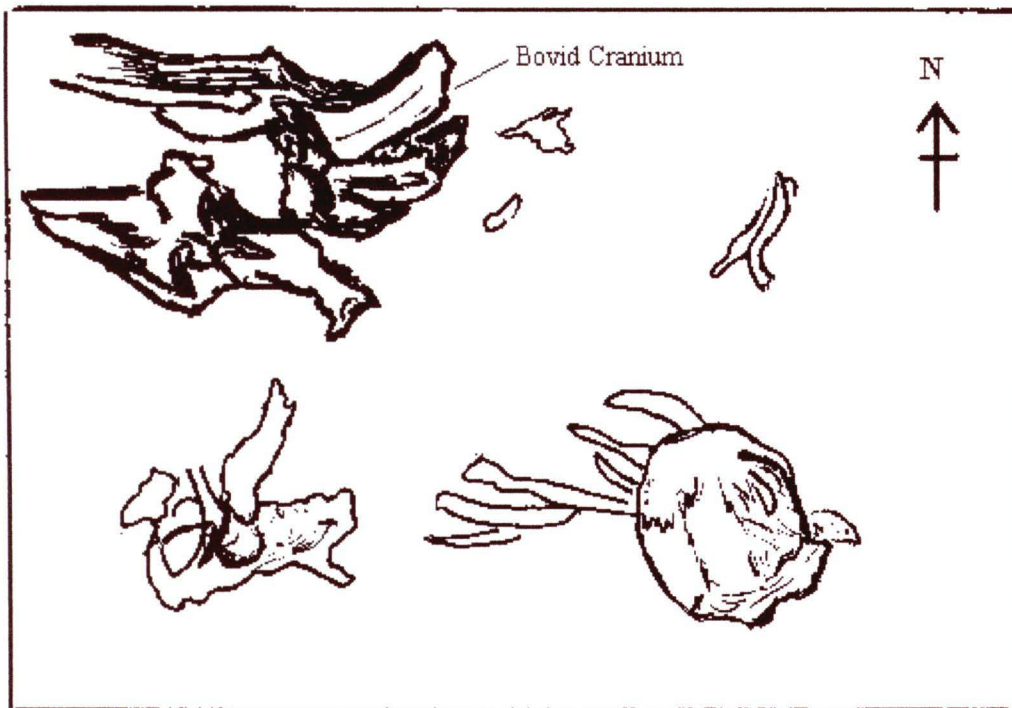


FIGURE A.39: SKHUL IX

(Facsimile drawn from Defleur 1993:134, Fig. 35 and Garrod & Bate 1937)

Appendix 4.7: TABUN

(page 567)

FIGURE A.40: TABUN C1

(Rough Sketch drawn from Garrod and Bate (1937) photo in Defleur 1993:122, Fig. 28)

