THE HUMAN SKELETAL REMAINS FROM ḤESBÂN'S CEMETERIES

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In the 1976 season human remains were taken from nine tombs, dating from Roman and possibly early Byzantine times. The bones taken from these sites were placed in labeled bags and later examined in a temporary "laboratory" at the expedition headquarters. The remains from one locus at a time were spread out on tables, brushed, sorted, examined for number and type of bone, measured, then entered on a chart. Bones judged important for further study were washed and dried in the sun. Following study they were put back into their labeled bags, and at the close of the season most were returned to the original cemetery site and reinterred in a tomb. Fragmentary, non-diagnostic bones were likewise returned to the cemetery. The study was conducted under some pressure of time, since the laboratory observers spent much time also in the excavation of skeletal remains; and the volume of incoming bones continued until a very few days before the season ended. During about 25 days of tomb excavation 176 bags of bones were processed, an average of 7 per day.

Among the burial sites were three "Type I" tombs, each with a central chamber and between 10 and 14 rock-cut crypts, or loculi, radiating out from the chamber. A fourth burial site was a shaft cut vertically into the rock and widened on each side. The other five sites were caves, the floors of which had been used for burials. Remains from 177 individuals were taken from these locations; 175 came from the main cemetery Area, F (and part of nearby Area G), and 2 came from a shaft tomb in Area K.

In one of these sites, F 31:8, there was some evidence for

Table 3. Age distribution of individuals from Ḥesbân's cemetery tombs, 1976.

TOMB	NUMBERS OF INDIVIDUALS IN VARIOUS AGE RANGES								TOTAL INDIVID-UALS	MEAN AGE
	Fetal-1	*1-3*	*5-10*	*12-18*	*19-25*	*26-45*	*46-65*	*Over 65*		
F.27	1		1	4		6	5		17	26.1
F.28				1		4	2		7	28.6
F.30	2		4	2		10			18	21.1
F.31	1	1	1	3	2	22	5	1	36	30.0
F.37	36	4		1	1	7	1		50	4.9
F.38	3	1	4	5	7	18	5	1	44	25.4
F.40						1			1	35.0
G.18			1			1			2	20.0
K.1					1	1			2	40.0
Totals	43	6	11	16	11	70	18	2	177	20.2
Percentages	24.3	3.4	6.2	9.0	6.2	39.5	10.2	1.1		

a casket; that is, a few rusted nails had been preserved. Sarcophagi were present in two sites (F.27, F.37); in the F.37 sarcophagus fragmentary human remains were found of 5 infants under 1 year and of an adult about 40 to 45 years of age.

In the three Type I tombs, which had a total of some 32 loculi, the bodies had been put in feet first, with the head toward the central chamber, in a supine position. In one instance a "pillow stone" was still in place, possibly intended originally to prop up the head of the corpse (F.31:15, Loculus 3). There were also some burnt bones and ashes, probably resulting from cremations, and one instance of a burial urn containing cremated remains (F.31:8, Loculus 1).

Most of the tombs had been entered previously by thieves seeking pottery and jewelry, and in their search they had removed some bones, disarrayed the others, and generally destroyed any semblance of articulation of the skeletons.

When the work was first began on tomb F.31, which apparently had not been discovered by robbers, the investigators hoped to find some intact skeletons. As they excavated each loculus, however, it turned out that virtually all of the bodies had been disturbed. It seemed as if users of the tombs had come to them repeatedly with successive burials, and each time they put a new body in they pushed back, or otherwise disarranged, the bones already there. Furthermore, the rock ceiling of the tomb had collapsed once or more often in the past during earthquakes, and heavy pieces of rock had fallen upon the bones. Quantities of dirt from the ground surface had entered as well. The soil was particularly thick at the front portions of the loculi, nearest the atrium area. The tombs were generally damp, and the moisture and soil alkalinity had adversely affected the preservation of the bones; many individuals were represented by a very few bones intact enough to be identified. The collection of bones in each loculus was generally considered to represent

individuals distinct from those in other loculi in the same tomb; thus separate counts could be taken for each loculus.

Since most of the remains excavated in the tombs were not in primary burial position, but mixed, it was necessary in the laboratory to sort out the bones from each locus for anatomical identification and count the distinctive bones to ascertain the minimum numbers of individuals represented. The determination of sex was much hindered by the lack of multiple indicators on individuals; only the strongest indications in the skull or the pelvis could be relied on. Thus the investigators tentatively identified 31 of the individuals as male, and 34 as female.

The people buried in these tombs may have been some of the wealthier members of the Roman town of Esbus. The demographic composition of those recovered from the excavations is presented in Table 3. Though the infant mortality rate seems high, it is significant that infant bones are the least likely to be preserved in an archeological site because of their fragility, small size, and incompleteness (lack of fusion); hence the actual rate may have been higher than is represented here.

There were at least three adult individuals and two infants whose calcined remains had undergone cremation (F.31:8, 22), and most of these remains have been prepared for shipment to the United States for further study. This includes the contents of a burial urn found intact in F.31:8.

The possibility that one crypt, F.31:8, Loculus 1, may have been a family tomb was suggested by the presence of two right humeri containing large supratrochlear septal apertures in the distal end (see Pl. XX:A). This seldom occurs, and when present at all, seems to occur more often in certain populations than in others (Bass 1971:117). If it is an expression of a genetic trait its presence in two individuals among the ten in this tomb may suggest common family membership. A third such humerus was found in Loculus 8 (Locus 22) of the same tomb.

Among the evidences for pathology or degenerative processes

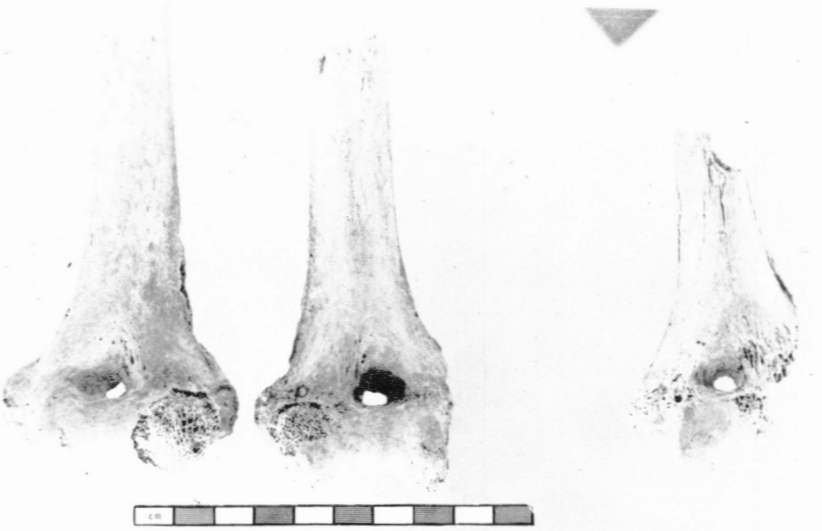
were many instances of arthritic lipping on bones such as the radius, ulna, phalanges (hand and foot), vertebrae (see Pl. XX:B), sacrum, femur, patella, talus, and metatarsal. Several cases of dental problems were noted, including caries, abscess, and tooth loss. In F.31:23 a single incisor stained green was recovered, evidently a result of its contact with some copper object. Other observations on pathologies included a healed greenstick fracture on a humerus (F.38:3), a distorted vertebra indicative of scoliosis (F.37:6), and a hole in a skull (F.38:3). The presence of 38 fetal or newborn skeletons in Cave F.37, either in a sarcophagus or buried in the soil, suggests either some sort of epidemic of infantile disease, postpartum disease of mothers and infants (although few adult bones are represented), or even some kind of induced abortion (or a select place for burying late-term miscarriages). This subject will be studied more closely when the bones are available in the United States.

Nineteen adult skulls, in various stages of preservation, and two infant skulls were recovered from F.38. Eight of these were sufficiently complete to allow measurements of length and breadth. The resulting cranial indices were calculated:

Skull No.	*Index*
5	.72
7	.72
6	.76
13	.77
4	.80
8	.82
10	.84
12	.88

Further measurements of these skulls will be made when they arrive in the United States.

Reference: Bass, William M., *Human Osteology: A Laboratory and Field Manual of the Human Skeleton.* (Columbia, Mo.: University of Missouri Archaeological Society, 1971).



A. Supratrochlear apertures in distal end of right humeri from Tomb F.31, Loci 8 (left and center) and 22 (right). Photo: Paul H. Denton.

B. Extreme lipping on vertebrae from Tomb F.31, Locus 8—two views of same vertebrae. Photos: Paul H. Denton.