HUMAN SKELETAL REMAINS FROM TELL ḤESBÂN, 1974

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At Heshbon people had been buried not only in the tombs but also in the vicinity of the homes and other buildings. As excavators on the *tell* would uncover human bones they would send for someone from the anthropological team who would help with the exposure of the bones and their preparation for photography and recovery.

While exposing the bones and then lifting them out for transport to the laboratory, the physical anthropologist would do his best to decide on the age and sex of the individual for the area supervisor's records. When some of the bones seemed very fragile and in danger of disintegrating, the physical anthropologist would sometimes coat them with diluted white glue to aid in their preservation. Otherwise they were usually taken out without preservative.

In the laboratory the bones would be spread on a table for inspection and cleaning and labeling. Every bone in salvageable condition would receive the number of the locus and pail which was represented in the original find spot. After making notations on readily observable pathologies and conditions, the anthropologist would prepare the specimens for packing to take overseas for further study at Loma Linda University. Bones which seemed too fragile for such a trip, or too fragmentary to be useful for diagnostic purposes, would be set aside for reburial. Such bones were interred in an excavated tomb and covered with soil.

At Loma Linda the bones were unpacked and put on tables in a laboratory for the inspection of several medical and dental specialists. Their observations were dictated on recording machine cassettes and then transcribed by a typist for later review by the

anthropologist, who took these notations and added to them his observations and measurements. This study is not yet finished, but the following report includes what has so far been determined.

Four recognizable burial or secondary inhumations with articulated bones were found at Tell Ḥesbân, and three at the Umm es-Sarab sounding, called G.8. In addition, other unrelated occasional human bones also were recovered in the main excavations, such as metatarsals, phalanges, vertebrae, teeth, and a clavicle and scapula. In Tomb E.4 a single finger bone was found. Because so few individual burials were found, it is difficult to make many generalizations about the populations represented in the site or the prevalence of disease.

Two of the burials (in A.9) were not associated with the ancient structures or artifacts, but were evidently intrusive additions in recent times. The first of these, in A.9:14, presented an interesting set of problems. The skull was found first propped up among rocks outside a wall; the mandible was found inside the wall, in what turned out to be the pelvic region of the rest of the skeleton. The main part of the skeleton was buried in a supine position. In the laboratory we found that the axis vertebra fitted the condylar surfaces of the skull, and the toothwear pattern on the mandible matched that on the maxilla; thus we ascertained that they had been associated as part of the same individual. The person was a male, and had long femurs. His third molars had erupted and showed some evidence of wear; so he would seem to have been over twenty-five. Yet his epiphyses had not fused on the radius, ulna, or humerus, nor the head of the femur, nor the iliac ridge, hence he would seem to have been considerably under nineteen. It appeared as if he had giantism; however, x-ray photos of his skull did not show evidence of pituitary enlargement.

The second of these recent burials, in A.9:19, lay directly under the first, about 0.20 m. lower. It was of a woman who showed every evidence of being a young adult, but whose third molars had not erupted. She also had been laid in a supine position, with her right hand over her thigh and her left over her

pelvis. A ring on the third finger of the right hand had stained not only the phalange but also the femur under it. Inside the crook of the left arm had been placed a mirror, and this was still present, though in fragmentary condition. In neither of these two cases was the cause of death evident, nor was there evidence of disease.

Farther down on the *tell*, in Areas C and D, other skeletons came to light (also possibly of recent origin). One of these, in C.5, yielded only fragments of a skull and some long bones, and some vertebrae, on which arthritic lipping was present. Another, in D.4:8, was a woman who had buck teeth and who had suffered from tooth decay, abscesses, and loss of some teeth. Her incisors showed evidence of hypoplasia, the result of disease or nutritional stress in her childhood. An opening in her skull suggested the possibility that a tumor had caused a thinning of the bone.

Carbon 14 analysis (at the University of California, Riverside, Radiocarbon Laboratory) of the ribs from the D.4:8 burial indicated that it had occurred within the past 150 years.

Three burials were found in G.8 at Umm es-Sarab 4 kilometers from Ḥesbân. One of these, in G.8:12, was of a child younger than six, whose molars and canines had lost their roots from resorption. Only a few fragments of the skeleton were recovered. This child had been placed in a tiny shaft tomb 2 m. down from the surface. The other two burials, in G.8:6 and in G.8:9, were of adults, one male and the other female, in unassociated deposits. The male, in G.8:6, had some missing teeth with healed bone, and a cavity in a molar, as well as some evidence of arthritis of the spine.

Among the scattered bones recovered from the G.10 "rolling-stone" tomb were more evidences of tooth decay, missing teeth, and partially or fully healed sockets, as well as some resorption of the bone of the mandible in one individual. The age at death of the persons who had been interred ranged from newborn infants to elderly, nearly toothless persons, and included both males and females. Two right iliums of matching size and from children

about 4 years of age attested to some possible childhood tragedies.

In conclusion we can say that the human remains for the 1974 season at Tell Ḥesbân speak of people who suffered the same kinds of illness that people in any country experience today, except that there seems to have been somewhat less distress from tooth decay and a higher rate of infant mortality. People seem to have had less trouble with impacted wisdom teeth than most do today. A person with a bad tooth who got desperate enough apparently could find someone who would pull it out, but he could not find help with fillings or other restorations. Arthritis and rheumatism must have plagued people in their later years as much as they do now.

Table 7. Preliminary Physical Measurements on Skeletons from Tell Ḥesbân, 1974

INDEX	INDIVIDUALS			
	A.9:14	A.9:19	D.4:8	G.8:6
Cranial	81.45	79.25		77.46
Cranial Module	143.16	139.16		140.16
Cranial Length-Height	79.63	79.25		82.09
Cranial Breadth-Height	97.76	100.00	107.78	105.97
Mean Height	87.77	88.43		92.52
Frontal-Parietal	67.53	66.40	74.31	67.75
Total Facial			181.17	
Upper Facial		53.27	111.37	
Nasal	45.09	48.48	46.29	
Orbital	88.57	84.61	94.59	100.00
Maxillo-Alveolar	58.18	100.00	92.03	
Palatal	90.42	78.16	77.89	

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