

# ANALYSIS OF THE HULL BAY SKELETONS, ST. THOMAS

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During the summer of 1974, archeologists in St. Thomas, United States Virgin Islands recovered two extended human skeletons (Fig. 1) from an archeological site (2-AVI-1-Ens-1) at Hull Bay, St. Thomas. The presence of colonial coffin nails indicated that at least one of the skeletons (B) was intrusive into the older Indian archeological site. However, the other skeleton (A) lacked colonial or modern artifacts and was directly associated with Indian pottery. Both skeletons subsequently were sent by the Office of the Territorial Archaeologist, Government of the Virgin Islands, to the Smithsonian Institution, Washington, D.C. for our examination. This report presents the result of our examination and current interpretation of the skeletons.

## Skeleton A

Skeleton "A" represents the relatively complete, well-preserved skeleton of a 33 - 41 year old Negroid adult male, approximately 170 cm (67 in.) in stature. A diagnosis of male is based on the general ruggedness of the skeleton, large mastoid processes on the skull, and the morphology of the pelvis. However, a male diagnosis is complicated by the presence of a slight preauricular sulcus on each ilium and relatively small femoral head diameters (43 mm). The suggested age at death of the beginning of middle age is based predominantly on the appearance of the symphyseal faces of the pubic bones. On both pubic bones the ventral rampart is complete and the rim and bony outgrowths had begun to form, matching Todd's stages VII to early VIII — an age of about 35 - 43 years. Sutures in the pterion region were open, but the sagittal suture was partially closed; the coronal was mostly closed and the lambdoid was completely closed — features compatible with the lower limit of the age suggested above. To verify further the age estimate, a ground thin section was prepared from a midshaft femoral cross-section. The application of Ahlqvist and Damsten's (1969) modification of Kerley's microscopic technique produced an age estimate of 35 years. Debris in the periosteal border of the cortex limited the accuracy of this estimate, but it confirms the estimate based upon the pubis.

Stature calculated from the maximum length of the femora (466 mm) using Trotter and Gleser's (1958) formulae for Negro males, is  $170 \pm 4$  cm (about 5 feet 7 inches).

Most morphological evidence fits a Negroid racial affiliation of the skeleton. Negroid traits include: a linear ellipsoid vault, somewhat flattened in the vertex area with a prominent occiput and relatively very wide forehead; a broad inter-orbital region accompanied by a wide nasal aperture with a small nasal spine and strikingly slight subnasal grooves; considerable facial and especially alveolar prognathism accompanied by a long palate; a receding chin region on the mandible; and rectangular orbits. Although the skull does exhibit a trace of facial flatness, it otherwise shows no characteristically Indian traits. Indian traits *not* present include shovel-shaped incisors, forehead constriction, and large pro-

jecting malars. The skeleton suggests a linear body build more Black than Indian, especially with elongated forearms and shins and relatively straight femora. The presacral part of the vertebral column is relatively short, another Negroid trait.

The only skeletal pathology is a trace of tibia periostitis with accompanying diagonal blood vessel impressions under the muscle of the anterior compartment. No growth arrest lines are apparent on the teeth. Six teeth were lost prior to death and two more are mere carious shells with accompanying alveolar abscesses. In general, the skeleton shows little skeletal pathology but considerable dental disease.

### **Skeleton B**

This skeleton also represents a Negroid male, between 30 and 38 years old with a living stature of about 173 cm (5 feet 8 inches). Morphologically, this skeleton is remarkably similar to skeleton "A". All of the Negroid traits documented for skeleton "A" are also found with skeleton "B". On this basis a Negro, not Indian, racial origin is suggested.

All skeletal traits suggest male sex, especially the large size of the skeleton, morphology of the pelvis, and femoral head diameters of 49 and 55 mm. Living stature of 173 cm was calculated from the maximum length of the tibiae (39.9 cm) using Trotter and Gleser's (1958) formulae for Negro males. An age at death of between 30 and 38 years is suggested by beginning union of cranial sutures and the over-all appearance of the skeleton.

In contrast to skeleton "A", this individual displays considerable skeletal pathology. In particular, the upper portion of the right tibia shaft, upper and lower portions of the right femoral shaft, the lower third of the left humerus display spindle-shaped periostitic tumor-like lesions which increase the shaft diameters about 75% and are accompanied by active cloaca. A partially healed fracture is located on the lower third of the left humerus near the lesion described above. The fracture has produced a 5 - 10 mm shortening of the humerus. An additional healed fracture occurs in the right clavicle shaft, resulting in a 10 mm shortening of that bone. The tumor-like lesions were probably produced from a blood-born infective organism.

Additional pathology includes marked periodontal bone loss with severe dental disease. Eight teeth were lost before death. Of the remaining teeth, twelve are carious and nine of these are mere shells or root stumps with active periapical abscesses.

In summary, both skeletons represent Black adult males of early middle age, remarkably uniform in morphology, health, and burial position. The association of coffin nails with skeleton "B" clearly suggests a relatively modern date which is compatible with our analysis. Skeleton "A" presents more of an interpretational problem, since it lacks associated colonial artifacts. The only associated artifact reported is a fragmentary pottery vessel found near the right wrist area. According to the archeologist Katheryne Kay, the vessel was definitely associated with skeleton "A" and can be tentatively dated to the Elenoid period, about 950-1250 A.D. If this ca. 1200 A.D. date is correct, it is difficult to reconcile with the morphological evidence from the skeleton. Assuming that the identification and date of the vessel is correct, the most likely explanation is that the vessel-skeleton association was accidental or perhaps represents the chance finding of the vessel when the burial pit was dug originally.

Possibly the contemporaries of skeleton "A" could have found the vessel and placed it with the skeleton at the time of burial. As unlikely as this procedure appears, it is certainly much more conceivable than a Black presence on St. Thomas at 1200 A.D. A bone sample taken from the left femur of skeleton "A" was analyzed by our carbon dating laboratory to be 104% modern (SI #2259) agreeing with a previous bone estimate made from the two fibulae. According to Smithsonian Radiation Biology Laboratory Anthropologist Robert Stuckenrath (personal communication), the analysis of the bone sample rules out a contemporary date for the skeletons, but can not determine how old the specimen actually is. The location of the skeleton near sea water makes organic contamination of the bone very probable. Thus the dating of the skeleton and related interpretations must be based on stratigraphic evidence and the association and analysis of the pottery vessel. These problems must be resolved by the archaeologists, perhaps by future excavation of this and related sites.

### BIBLIOGRAPHY

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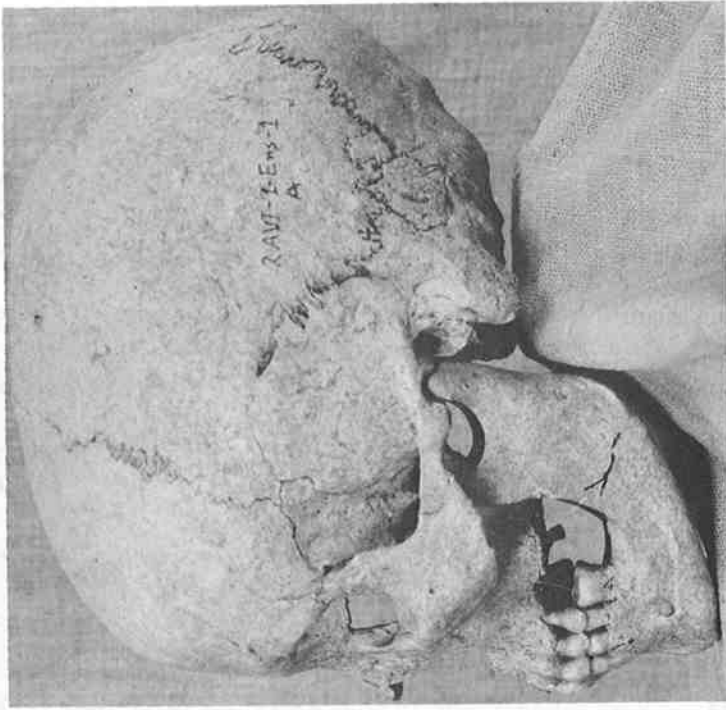
**TABLE I****Selected Measurements in mm and Indices  
of the Hull Bay Skeletons**

<b><u>Skull and Mandible</u></b>	<b>A</b>	<b>B</b>
Horizontal circumference	517	489
Glabello-occipital length	186	178
Chin height	34	41
Ramus breadth	34	33
Facial angle	81	76
Nose Breadth	30	24
Nose Height	53	48
Cranial index	72	73
Mean height index	71	75
Fronto-parietal index	77	72
Cranial facial index	99	101
Facial index	86	90
Upper facial index	53	50
Nasal index	57	50
Left orbital index	82	87
External palatal index	112	114

Table 1 (continued)

**Long Bones**

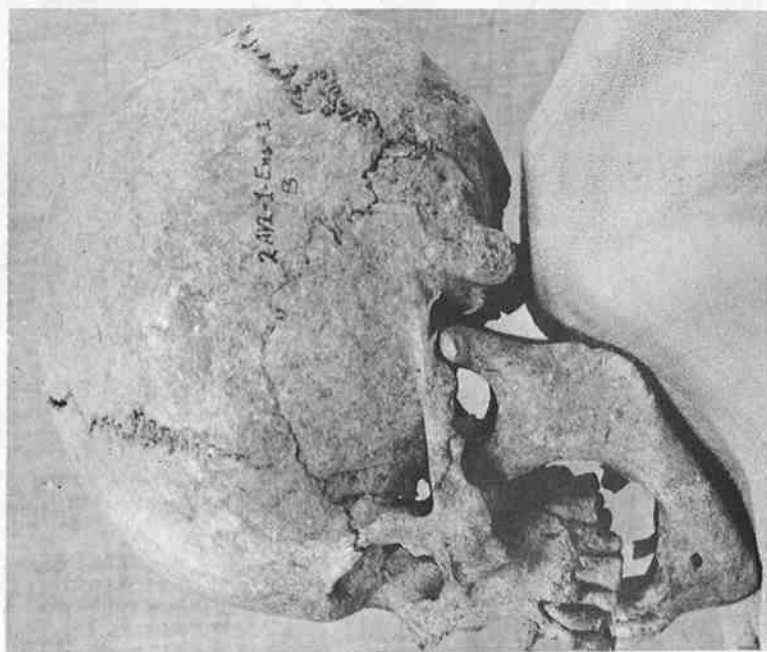
	L	A	R	L	B	R
<b>Humerus</b>						
maximum length	322		324	343		350
head, vert. diam.	---		44	49		49
<b>Radius</b>						
maximum length	266		267	272		272
<b>Ulna</b>						
maximum length	289		291	292		295
<b>Femur</b>						
maximum length	466		466	471		475
head maximum diam.	---		43	50		49
<b>Tibia</b>						
maximum length	391		392	399		399
<b>Fibula</b>						
maximum length	---		---	388		386
<b>Brachial index</b>	---		82	79		78
<b>Crural index</b>	---		85	85		84
<b>Robusticity index</b>	---		13	12		13
<b>Pilastric index</b>	120		126	111		94
<b>Platymeric index</b>	80		83	67		71
<b>Platycnemic index</b>	65		66	62		88



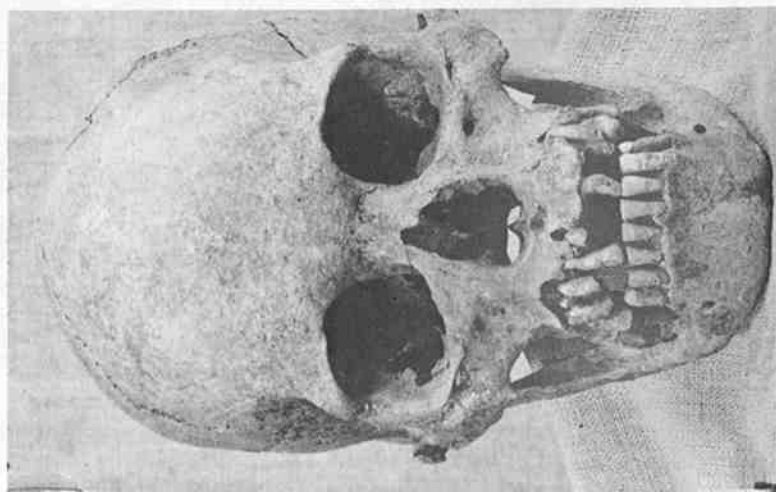
Skull A, lateral view



Skull A, frontal view



Skull B, lateral view



Skull B, frontal view



The Hull Bay Skeletons (A and B) in situ.