APPENDIX A1

HUMAN REMAINS FROM THE WSPPF SITE, MANHATTAN

Bioarchaeological Descriptions with References Cited

and

Skeletal Biology References

(An Annotated Bibliography of All References Cited and Consulted For Analysis of *In-Situ* and Isolated Human Remains)

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BURIAL DESCRIPTIONS - based upon field plans and minimal laboratory analyses

Test Trench 3N Extension
Individual 1
Sex - Female:
1) Skeletal morphology used for assessment: femoral length (Bass 1995:231, Table 3-30; Thieme 1957). Both the right and left femora measure 400 mm based upon *in-situ field* measurement. This falls below the Bass female cut-off of 439.10 mm +/-2.456 mm.
2) Following the established protocol the individual could only be exposed for field planning. Consequently, the innominate was not lifted from its original burial position. Since the pelvic bones and sacrum were flattened and compressed by soil movement the greater sciatic notch could not be clearly viewed or examined. This lead to an erroneous field assessment that sexed this individual as male.

Age at death - Adult Range, > 18 -20 years:
1) Based upon the completeness of epiphyseal closure (Bass 1995:226-229).

Stature - 149.18 cm - 156.62 cm greatest possible range:
Right Femur (Bass1995:233)

Stature Mean 152.90 cm	Stature High 156.62 cm	Stature Low 149.18 cm

Left Femur (Bass1995:233)

Stature Mean 152.90 cm	Stature High 156.62 cm	Stature Low 149.18 cm

Osteometrics:
Right Femur

Buiskstra & Ubelaker 1994:82-83	#61	400 mm
Buiskstra & Ubelaker 1994:82-83	#66	305 mm
Buiskstra & Ubelaker 1994:82-83	#67	258 mm
Buiskstra & Ubelaker 1994:82-83	#68	90 mm
Buiskstra & Ubelaker 1994:82-83	#64	300 mm
Buiskstra & Ubelaker 1994:82-83	#65	321 mm

1) Platymeric Index (Bass 1995:225) = 93.46 - Eurymeric
2) Robusticity Index (Bass 1995:228-229) = 64.6

Left Femur

Buiskstra & Ubelaker 1994:82-83	#61	400 mm
Buiskstra & Ubelaker 1994:82-83	#66	305 mm

Osteometrics:
Right Femur (continued)

Buiskstra & Ubelaker 1994:82-83	#67	256 mm
Buiskstra & Ubelaker 1994:82-83	#68	90 mm
Buiskstra & Ubelaker 1994:82-83	#64	286 mm
Buiskstra & Ubelaker 1994:82-83	#65	332 mm

1) Platymeric Index (Bass 1995:225) = 86.15 - Eurymeric
2) Robusticity Index(Bass 1995:228-229) = 64.0

Right Tibia

Buiskstra & Ubelaker 1994:82-83	#73	342 mm
Buiskstra & Ubelaker 1994:82-83	#74	110.5 mm
Buiskstra & Ubelaker 1994:82-83	#72	282 mm

Left Tibia

Buiskstra & Ubelaker 1994:82-83	#73	359 mm
Buiskstra & Ubelaker 1994:82-83	#74	110.0 mm
Buiskstra & Ubelaker 1994:82-83	#72	285 mm

Right Fibula

Buiskstra & Ubelaker 1994:82-83	#76	136 mm

Left Fibula

Buiskstra & Ubelaker 1994:82-83	#76	135 mm

Ethnicity - Indeterminate:
1) The lack of crania makes a definitive assignment impossible.

Burial Treatment:
1) Supine, right and left hand positions at the side.
2) Approximate south-north orientation, head of individual is placed at north.
3) Form fitting wood coffin; wood a pine species.
4) No associated grave goods. Iron clinch nails are positioned at the right knee and left hand positions.
5) Buried in a sandy soil fill.

Taphonomy:
1) A soil pH station was established outside the right side of the coffin, along the midshaft of the thigh (femoral shaft). The soil pH was measured at 5.5.
2) The coffin was disturbed by current excavation just below the proximal tibia. No skeletal elements of the foot were recovered.

Test Trench 4

No materials were recovered from this Test Trench. There was a minimal disturbance of four possible interments or graves as per the established protocol for Phase 1a construction. These interments are recorded on the field plan as decayed wood lines. For ease of description these interments are listed here as 1 through 4. The interval between interments is approximate 20cm (between interments 1-3). The interments also appear to be staggered, where the feet of the previous grave are parallel to the head of the next grave.

Individual 1 (western-most interment):

The skeletal elements visible were the right distal femur, right proximal tibia, right fragmentary patella and left proximal tibia.

Osteometrics:

Buiskstra & Ubelaker 1994:82-83	#62	77.5 mm

These materials were highly fragmented and crushed due to the depth of the graves wet sandy soil. The burial was encountered at 7.4' below current ground surface.

Sex - Male ?:

1) The exposed distal femur was large, consistent with the male range.

Age - Mature Adult Range

1) The assessment is based upon the developmental age of the exposed long bones.

Stature - Indeterminate

1) No skeletal elements were excavated that could yield such information.

Ethnicity - Indeterminate

1) No crania or postcrania were available for assessment.

Burial Treatment:

1) Possibly supine
2) Approximate south-north orientation, head of individual is placed at south.
3) Possible form fitting wood coffin, wood is a pine species.
4) No associated grave goods. Iron clinch nail placed at the left floating rib area.
5) Buried in a sandy soil fill.
6) A soil pH station was established between this individual's thighs, near the midshaft of the right femur. The soil pH was measured as 5.9.

Individual 2 (center of Test Trench):

Sex, Age, Stature, Ethnicity - Indeterminate

Burial Treatment:

1) Body position is unknown.
2) Approximate south-north orientation.
3) Possible form fitting wood coffin, wood is a pine species.
4) No associated grave goods.

5) Buried in a sandy soil fill.
6) A soil pH station was established in the center of a possible coffin. The soil pH was measured as 5.7.

Individual 3 (north-center of Test Trench):

A femoral shaft (adult range) and a rib fragment were encountered on the cleared ground surface.

Sex, Age, Stature and Ethnicity - Indeterminate

Burial Treatment:
1) Body position is unknown.
2) Approximate south-north orientation.
3) Possible form fitting wood coffin, wood is a pine species.
4) No associated grave goods.
5) Buried in a sandy soil fill.

Individual 4 (south-eastern corner of the Test Trench):

The end of a coffin wood outline was encountered. No bone remains were observed. A soil pH station was established within the coffin outline, and the soil pH was measured at 5.7.

Sex, Age, Stature and Ethnicity - Indeterminate

Burial Treatment:
1) Body position is unknown.
2) Approximate south-north orientation.
3) Possible form fitting wood coffin, wood is a pine species.
4) No associated grave goods.
5) Buried in a sandy soil fill.

Test Trench 14

Individual 1
Sex - Female:
1) Cranial characters of the right orbital roof and the right mastoid were used for this assessment (Buikstra and Ubelaker 1994:20; Bass 1995:85-87).

Age - Adult Range, > 35 years (possibly Mature Adult)
1) Although minimally excavated, it was clear the third molars in the skull had erupted and were in wearing occlusion.

Stature - Indeterminate
1) Only the ulnae, radii and femora were exposed by excavation. This was done in order to establish that there was indeed an interment at this deep depth (11.9' below current ground surface) and location. Unfortunately, all long bones were badly damaged. The ulnae lacked their distal ends, the radii and femora both the proximal and distal ends.

Ethnicity - European Descent?:
1) Protocol dictated limited excavation, therefore the skull was left in its original *in-situ* position and the face was not exposed. While a definitive sex assessment was possible, racial identity could not be assigned in the field.

Pathology (Dental Variation):
One dental anomaly is noted for this individual. A lower left molar 3 (#17) exhibits an accessory molar. The accessory molar is conical in shape possesses one root. There is dental calculus or plaque on the tooth, and the heaviest concentration is on the distal aspect. Other dental attributes are:

Crown/Root Formation (see Moores et al. 1963, scored as 14)
Dental Wear (see Smith 1984, scored 4/5)
Dental Wear (see Scott 1979, scored 2)

The third molar exhibits a moderate sized caries on the occlusal surface (lingual half, protoconid-hypoconid basin) and the lingual-interproximal surface. The later cary has an even larger discolored area of enamel, indicating decay in both the enamel and dentine. There is enamel pitting on the mesial and occlusal surfaces. Dental calculus or plaque is exhibited on the buccal, distal, lingual and mesial aspects. Other dental attributes are:

Crown/Root Formation (Moores et al. 1963) - 14
Dental Wear (Smith 1984) - 5
Dental Wear (Scott 1979) - 4-5
Dental Variation (Turner et al. 1991):
Metacone Cusp 3 - 0
Root Number - 2

Osteometrics (Buiskstra and Ubelaker 1994: 61-63):

	M3(#17)	Accessory Molar
Mesiodiatal Diameter	10.44 mm	5.85 mm
Buccolingual Diameter	8.53 mm	6.85 mm
Crown Height	9.68 mm	7.92 mm

Burial Treatment:
1) Supine, head turned to the left , right and left hand positions at the side.
2) Approximate south-north orientation, head of individual is placed at south.
3) Form fitting wood coffin, wood is a pine species.
4) No associated grave goods. Iron clinch nail placed at the left floating rib area.
5) Buried in a sandy soil.

Taphonomy:
1) The interment was damaged most likely due to the greater depth of the grave (11'.9" below current ground surface).
2) Two soil pH stations were established for this burial. The first in the vicinity of the right elbow, but outside the coffin. The second was placed inside the coffin, between the right and left femora at midshaft. Both pH readings were measured at 6.0.

Test Trench 18

Individual 1

Sex - Male:
1) Skeletal morphology used for assessment: Greater sciatic notch and right pube (Bass 1995:208-218; Buikstra and Ubelaker 1994:16-18, 22-24; Gilbert and Suchey nd. (2008); Phenice 1969; Sutherland - Suchey 1991).

2) Femoral length (Bass 1995:231, Table 3-30; Thieme 1957): Field in-situ measurement places the left femur at 475 mm. This is the male/female overlap range as listed by Bass (which is 439.10-477.34 mm).

Age at death - 19-40+ years greatest possible range:
1) Right pube (Suchey-Brooks system, Brooks and Suchey 1990): Mean age: 23.4 years, Age range: 19-34 years.
2) Left innominate auricular surface (Buiskstra and Ubelaker 1994:24-32; Meindl and Lovejoy 1989): 30+ - 40+ years

Stature - 169.89cm to 179.67cm greatest possible range:
Left Femur (Bass 1995:233)

Stature Mean: 175.73 cm	Stature High: 179.67 cm	Stature Low: 171.79 cm

Right Tibia (Bass1995:250)

Stature Mean: 173.89 cm	Stature High: 177.89 cm	Stature Low: 169.89 cm

Left Tibia (Bass 1995:250)

Stature Mean: 173.89 cm	Stature High: 177.89 cm	Stature Low: 169.89 cm

Osteometrics:

Buikstra & Ubelaker 1994: 82-83	Lt. Femur	#61	475 mm
Buikstra & Ubelaker 1994: 82-83	Rt. Tibia	#69	380 mm
Buikstra & Ubelaker 1994: 82-83	Lt. Tibia	#69	380 mm

Ethnicity - Indeterminate
1) The lack of crania makes a definitive assignment impossible.

Burial Treatment:
1) Supine, left hand position at the side.
2) Approximate west-east orientation, head of individual is placed at the west.
3) Form fitting wood coffin, wood is a pine species.
4) No associated grave goods. Iron clinch nail placed at the upper left thigh (trochanter area of the shaft).
5) Buried in a sandy soil fill.

Taphonomy:
1) The upper torso and right lower hip and thigh of this individual was lost by the construction of an old pipe trench. At a later time, a tree root entered the grave along the individual's knee and extended along the left side of the coffin. The tree root exited the grave along the left elbow and continued across to Individual 2, disturbing that individual's crania area. This tree root extends across the old pipe trench, indicating that the tree root growth occurred after the pipe trench was dug and refilled.
2) Soil pH between Individual 1 and individual 2 is 7.0. Soil pH stations are parallel to the left femoral shaft and left foot.

Test Trench 18
Individual 2

Sex - Male:

1) Skeletal morphology used for assessment: Left pube (Suchey-Sutherland system, Sutherland and Suchey 1991).
2) The pelvic outlet was not excavated, but at the time of excavation the general outline was thought to be female. This observation proves to be in error.
3) Length of humerus was measured *in situ* at 33 cm (Standards Code #40). This gave an indeterminate sex assignment of female/male overlap (Bass 1995:156-158; Thieme 1957). It is assumed this measurement is distorted.

Age at death - 15-23 years:

1) Left pube (Suchey-Brooks system, Brooks and Suchey 1990): a) Mean age: 18.5 years
b) Age range: 15-23 years.

Stature - 168.90cm - 178.04cm greatest possible range:

1) Left Humerus (Bass 1995: 158-162)

Mean Stature: 173.47 cm	Stature High: 178.04 cm	Stature Low: 168.90 cm

Osteometrics:

Buikstra & Ubelaker 1994:80	#40	330 mm

Ethnicity - Indeterminate:

1) The lack of crania makes a definitive assignment impossible.

Burial Treatment:

1) Supine, right hand position is placed on right hip, left hand is place at left side.
2) Approximate west-east orientation, head of individual is place at the west.
3) Form fitting wood coffin, wood is a pine species.
4) No associated grave goods.
5) Buried in a sandy soil fill.

Taphonomy:

1) The coffin lid for this individual was collapsed exposing the left arm and right forearm. The crania were disturbed by an old pipe trench and possible extension of the tree root extending from individual 1.
2) Soil pH between Individual 1 and individual 2 is 7.0. Soil pH stations are parallel to the right lower forearm and the base of the coffin.

Test Trench 18, Footing 2
Individual 3

Sex - Indeterminate:

1) The skull and mandible are badly fragmented and crushed. The damaged was caused from current and past construction episodes.

2) The humeri are incomplete, crushed. The damaged was cause from current and past construction.

Age at death - Adult Range:
1) No age indicators were available upon field inspection.

Stature - Indeterminate:
1) The only long bones available for study were the two humeri which were damaged making any osteometric and morphometric analyses impossible.

Ethnicity - Indeterminate:
1) Indeterminate see reasons listed above.

Burial Treatment:
1) Supine, arms are assumed to be placed at sides.
2) Approximate west-east orientation, head of individual is place at the west.
3) Form fitting wood coffin, wood is a pine species.
4) No associated grave goods.
5) Buried in a sandy soil fill.

Taphonomy:
1) A soil pH station was established outside the coffin, near the left elbow area. Soil pH was measured at 6.9.
2) Cranial region is crushed to due current construction.

Test Trench 18, Footing 2
Individual 4

Sex - Female:
1) Skeletal morphology used for assessment, the supra-orbital ridge or tori, is scored as a 1 in the Standards protocol. In European descent populations this is considered female (Bass 1995:86-87; Buisktra and Ubelaker 1994:20; France 2001:90-104).

Age at death - Young to Mature Adult:
1) Based upon the developmental stage of the frontal bone. A mandibular fragment was recorded on the field plan, but was later lost by construction traffic over the grave site. No forensic details could be recorded at the time of drawing the field plan.

Stature, Ethnicity - Indeterminate.

Pathology:
1) The frontal bone's (supra-orbital ridge or tori) orbital roof exhibits a porotic hyperstosis condition. The pathology was scored as 6.1.3 according to the Standard's code (Buikstra and Ubelaker 1994:115). A question if this condition could be further classified as cribia orbitalia remains. Only this fragment was available for field examination, no other part of the skull, especially the parietal bones or could be examined. As mentioned above, a mandibular fragment, perhaps the anterior corpus of the mandible, was noted on the field plan.

Unfortunately this fragment was lost due to the construction traffic in this excavation trench. No further observations could be made on the teeth for hypoplastic lines. Based upon this evidence, Test Trench 18, Individual 4 had suffered from an iron based anemia and/or nutritional stress. The scale and degree of severity are impossible to assess at this time.

Burial Treatment:
1) Supine. Arm positions cannot be determined.
2) Approximate west-east orientation, head of individual is place at the west.
3) Form fitting wood coffin, wood is a pine species.
4) No associated grave goods.
5) Buried in a sandy soil fill.

Taphonomy:
1) A soil pH station was established outside the coffin, near the left side of the skull. Soil pH was measured at 6.9.
2) Cranial region is crushed to due current construction.

Individuals Identified among Comingled Recovered Remains

In Test Trenches 3, 4 and 18, several individuals have been identified. These remains of these individuals were mixed among the scatter of isolated remains recovered from these trenches.

Test Trench 3
Individual 2
Sex - Male:
1) Mandibular morphology of mandible, *3.1* (Bass 1995:85-88; France 2001:99-104), Standards score of 5 for the mental eminence (Buisktra and Ubelaker 1994:20).
2) Left frontal morphology, *3.5* (Bass 1995:85-88, France 2001:99-104), Standards score of 4 for the supra-orbital ridge/Glabella (Buiskstra and Ubelaker 1994:20).

3) Left temporal and petrous portion morphology, *3.7* (Bass 1995:85-88, France 2001:99-104), Standards score of 4 for the mastoid process (Buiskstra and Ubelaker 1994:20).
4) Right acromion process of scapula, spine, glenoid cavity, scapula neck and auxiliary border fragment of scapula , *3.16* (Bass1995: 125-129; von den Driesch 1976 code GLP): male, the male cutoff is >37.00mm.
5) Left clavicle, *3.17* (Bass 1995:136): male (Standards code #35), female cutoff >140.28mm.
6) Right humerus, *3.113* (Bass 1995:159-161) minimum/ maximum diameter of diaphysis either falls within the upper female range or within a male/female overlap. However, the overall morphology of this humerus is comparable to male humeri.
7) Left humerus, *3.114* (Buiskstra and Ubelaker 1994:80) biepicondylar width, articular width and minimum/ maximum diameter of diaphysis either fall within the upper female range or within a male/female overlap, however, the overall morphology of this humerus is comparable to male humeri.
8) Right innominate morphology, *3.111* (Bass 1995:208-218). Standards codes (Buiskstra and Ubelaker 1994:16-19):
  a) Ventral arc - male (3).
  b) Subpubic concavity - cannot be scored, sex indeterminate.
  c) Ischiopubic ramus ridge - male (3).
  d) Greater sciatic notch - cannot be scored, sex indeterminate.
  e) Preauricular sulcus - Male (3), sulcus is absent.
9) Left innominate morphology, *3.112* (Bass 1995:208-218). Standards codes (Buiskstra and

Ubelaker 1994:16-19) are:
a) Ventral arc - male (3).
b) Subpubic concavity - cannot be scored, sex indeterminate.
c) Ischiopubic ramus ridge - male (3).
d) Greater sciatic notch - cannot be scored, sex indeterminate.
e) Preauricular sulcus - cannot be scored, sex indeterminate.

Age at Death - > 35.9+ years:
1) Dental eruption has all teeth erupted, in occlusion and heavily worn indicating an age well over 35 years.
2) Right parietal fragment, *3.6*, suture score (Buikstra and Ubelaker 1994) - 2 (significant closure) at Obelion, estimated age at death with a range of 23-45 years, mean at 34.5 years.
3) Right and left parietal Fragments, *3.10*, suture score - 2 (significant closure) at the anterior sagittal, estimated age at death with a range of 23-45 years, mean at 23.5 years.
4) The clavicle, *3.17*, sternal articulation is scored on the Suchey-Webb system (Webb and Suchey 1985) as cvii, complete union, stage 4. This places the individual > 21 years at death.
5) Anterior rib fragments with sternal articulation scores for aging (Íşcan et. al. 1985, 1985, 1993):
a) M5a -- 33-42 years, *3.50*
b) M5b -- 33-42 years, *3.51*
c) M5a,b – 33-42 years, *3.53*
d) M5a,b – 33-42 years, *3.54*
e) F5a – 33-46 years. *3.67*
f) F5a – 33-46 years, *3.68*
g) F5a – 33-46 years, *3.69*
h) F5a – 33-46 years, *3.70*

Stature - 160.23 to 172.77cm greatest possible range:
Left Radius (Bass 1995:169)

Stature Mean - 164.88 cm	Stature High - 169.54 cm	Stature Low - 160.23 cm

Left Ulna (Bass 1995:174)

Stature Mean - 168.05 cm	Stature High - 172.77 cm	Stature Low - 163.33 cm

Ethnicity - European Descent:
1) Caliber Index (Bass 1995:174) - 18.9931, within Bass' Southern German range.

Pathology and Skeletal Variation:
Mandible *3.1*
1) Perimortem loss of the incisors (#23 - #26), left premolar 1 (#21) and molars (#17-#19, #30-#32).
2) Postmortem loss of left premolar 3 (#20), right premolar 1 and 2 (#28-#29) and canines (#22 and #27).
3) Resorption of incisor and molar regions.
4) Buttressing of the anterior portion.
5) Angles are strongly muscle marked.
6) Right and left mylohyoid bridging present
7) Left side has two mental foramina.

Upper Right Incisor 2 (#7), *3.2*
1) Linear enamel hypoplasia (LEH): 3 lines visible, earliest incidence aged between 2.0-2.3 years, second incidence aged at 2.3-2.5 years, final incidence aged between 3.4-3.5 years.
2) Dental variation (Turner et al. 1991, Scott and Turner 1997): Shovel UI 2 - 1.0
3) Osteometrics (Buiskstra and Ubelaker 1994: 61-63):
a) Mesiodiatal Diameter 6.18 mm
b) Buccolingual Diameter 6.88 mm
c) Crown Height 9.78 mm
4) Dental wear (Smith 1984) - 3
5) Root apex closed (Moore et. al. 1963) - 14

Upper Right Premolar 3 (#5), *3.3*
1) Dental variation (Turner et al. 1991, Scott and Turner 1997): P/1 Cusp - 1
2) Osteometrics (Buiskstra and Ubelaker 1994: 61-63):
a) Mesiodiatal Diameter 6.16 mm
b) Buccolingual Diameter 7.01 mm
c) Crown Height 8.20 mm
3) Dental wear (Smith 1984) - 2
4) Root apex closed (Moore et. al. 1963) - 14

Upper Right Premolar 4 (#4), *3.4*
1) Dental variation (Turner et al. 1991, Scott and Turner 1997): P/2 Cusp - 4
2) Osteometrics (Buiskstra and Ubelaker 1994: 61-63):
a) Mesiodiatal Diameter 5.23 mm
b) Buccolingual Diameter 7.04 mm
c) Crown Height 6.81 mm
3) Dental wear (Smith 1984) - 4-5, on the buccal aspect
4) Root apex closed (Moore et. al. 1963) - 14
5) Flattening of the mesial-anterior aspect

Left Frontal, *3.5*
1) Supra-orbital margin exhibits a healed porotic hyperstosis on the orbital roof, Standards codes 6.2.1; 6.3.3 (Buikstra and Ubelaker 1994: 114-115).
2) Supra-orbital torus, temporal line and lateral frontal boss has an infection (remodeled bone), Standards codes 6.3.3 and 8.3.3.
3) Arachnoid fovae (Granular Fovae) are present on the endocranial surface.

Right Parietal Fragment, *3.6*
1) Multiple parietal foramina.
2) Arachnoid fovae present on the endocranial surface.

Left partial maxillary fragment (orbital floor region) and zygomatic (orbital region), *3.14*.
1) The fragment has two zygomatic foramina, connecting to two foramina on the medial-anterior aspect.
2) Remodeled bone occurs on the zygomatic.

Right Scapula, *3.16*
1) Arthritic acromion process.
2) Odd pattern of four large foramina (superior aspect), in an alignment (row) along the base of the spine (medial-lateral)

Left Scapula, *3.15*
1) There are multiple foramina on the superior aspect of the scapula neck. Two of these foramina are large, one above the other (anterior-posterior).

Left Clavicle, *3.17*
1) The conoid tubercle is arthritic and strongly muscle marked.

Right Humerus, *3.113*
1) An extensive spicule formation of an ossified ligament on the medial head of the triceps, Standards code 8.1.3. This area is also strongly muscle marked.

Left Humerus, *3.114*
1) The crest of the lesser tubercle and greater tubercle for the pectoralis major and latisimus dorsi attachments are strongly muscled marked.

Right Radius, *3.115*
1) A healed compound fracture with callus formation and closed lacunae at the midshaft of the radius, Standards codes 5.1.1, 5.1.5?, 5.3.1, 5.4.1, 5.4.6.

Left Radius, *3.116*
1) The distal articular surface is arthritic and an osteophytic lipping is evident around the articular surface, Standards code 5.4.7. The posterior aspect's dorsal tubercle has healed lesions, medial and lateral to the tubercle.

Right Ulna, *3.117*
1) The ulnar or brachial tuberosity exhibits remodeled bone.
2) A healed compound fracture with a small callus formation is found at the midshaft, Standards codes 5.1.1, 5.3.1, 5.4.1.

Left Ulna, *3.118*
1) The guiding ridge has a meniscus lesion that travels in a medial-lateral direction, indicating a tear of the meniscus.
2) The ulnar or brachial tuberosity exhibits remodeled bone.

Right Metacarpal II, *3.89*
1) Arthritic bony lipping is exhibited on the distal end, dorsal aspect. Standards code 8.1.2.

Right Metacarpal III, *3.90*
1) This skeletal element suffered a major catastrophic compound fracture which healed during this individual's life time. There is a significant shorting of the metacarpal's length due to this injury. This injury has also effected the rest of the right hand, most notably seen with metacarpal II, lunate, triquetral and trapezium. The articular facets exhibit arthritis and eburnation, Standards codes are 8.5.1, 8.6.3. The healed fracture Standards codes are: 5.1.9, 5.3.1, 5.4.1, 5.4.3, 5.4.7 and 5.5.3.

Right Lunate, *3.84*
1) An additional facet was formed on the palmar aspect-triquetral aspect articulation. The facet continues around and extends to the scaphoid articulation. This additional facet exhibits arthritic lipping with the strongest expression on the triquetral articulation. Standards codes 8.1.1 and 8.2.1.

Right Triquetral, *3.85*
1) The palmar articulation facet is arthritic and eburnated. Standards codes are: 8.1.1, 8.5.3 and 8.2.1.

Right Trapezium, *3.86*
1) The metacarpal II base articular facet is heavily polished and eburnated. Standards codes 8.5.2 and 8.6.3.

Right Proximal Phalanges, Digit II-IV, *3.94-3.96*
1) The palmar aspect diaphysis is strongly muscle marked along the flexor digitorum superficial. There is also Arthritic Lipping on the distal palmar aspect. Standards code 8.1.2.

Right Intermediate Phalanx, Digit II, *3.99*
1) Arthritic bony lipping is exhibited on the proximal end, dorsal aspect's articular surface. The distal end, palmar aspect, superior to the articular surface condyles also exhibits the same. The palmar aspect is moderately muscle marked.

Left Metacarpal I, *3.102*
1) The distal end, medial aspect and distal palmar aspect exhibit remodeled bone.

Left Metacarpal II, *3.103*
1) The proximal end, dorsal aspect exhibits both a lesion and remodeled bone on the articular surface. There is also a healed lesion on the distal end, dorsal aspect, just superior to the articular surface.

Left Metacarpal III, *3.104*
1) The proximal end, palmar aspect exhibits an arthritic porosity, Standards code 8.3.1. There is also a similar arthritic porosity, Standards code 8.3.1, on the dorsal aspect.

Left Metacarpal IV, *3.105*
1) The proximal end, dorsal aspect, just inferior to the articular surface exhibits an active lesion. The palmar aspect, proximal articular surface has a slight degree of arthritic lipping, Standards code 8.1.1. Finally the distal end, dorsal aspect, just superior to the articular surface exhibits another active lesion.

Left Proximal Phalanx, Digit I, *3.106*
1) The distal end, palmar aspect, articular surface has an arthritic formation, Standards codes 8.7.2. There is also eburnation of the distal end, Standards codes 8.5.3 and 8.6.3.

Left Proximal Phalanx, Digit II, *3.107*
1) The palmar aspect is strongly muscled marked, especially along the flexor digitorum superficial region. There is also arthritic lipping on the palmar aspect, articular surface.

Left Distal Phalanx, Digit I, *3.108*
1) There is arthritic lipping on the proximal articular surface. An arthritic spur is also evident on the lateral aspect, Standards code 8.1.3

Left Intermediate Phalanx, Digit II, *3.109*
1) The palmar surface along the proximal end is strongly muscle marked.

Left Femur, *3.110*
1) The femoral head's fovea capitis is remodeled and exhibits arthritic lipping, Standards code 8.1.2. 8.2.2, 8.4.2, 8.8.2. The injury suggests a tear of the teres femoris ligament. There is also modern mechanical damage to the bone.
2) The proximal shaft had suffered a compound fracture, which had healed. There is a robust muscle marked posterior-medial area along the vastus intermedius region.

Right Tibia, *3.121*
1) There is a sharp anterior crest, almost sabered shaped.
2) There is an arthritic callus on the distal medial shaft.
3) There is a healed fracture at the midshaft, on the anterior aspect, Standards code 5.1.2, 5.3.1.

Left Tibia, *3.122*
1) There is a sharp anterior crest, almost sabered.

Right Fibula, *3.123*
1) There is a fracture which has healed at the midshaft, Standards code 5.1.1, 5.1.2, 5.3.1. This region is also strongly muscle marked.
2) The lateral proximal shaft suffered an infection on the anterior aspect, Standards code 5.4.6.
3) There is a lesion on the proximal articular surface, also remodeled to accommodate a remodeled proximal tibia.

Right Calcaneus, *3.154*
1) There is a series of "pit" like lesions and an odd articular surface of the three pads along the distal-lateral aspect, which is distal of the sulcus for the interosseus ligament.

Right Proximal Phalanx, Digit V, *3.171*
1) The region for the attachment for flexor digitorum brevis on the lateral aspect is strongly muscle marked.

Left Metatarsal I, *3.181*
1) There is arthritic lipping on the plantar aspect of the head. The lipping is greater on the medial side, Standards codes 8.1.2.

Left Metatarsal IV, *3.184*
1) The proximal end had experienced a compound fracture, which had healed sometime earlier in life, Standards code 5.3.1, 5.4.1.

Left Proximal Phalanx, Digit II, *3.187*
1) The region for the attachment for the flexor digitorum brevis on both the medial and lateral aspects are strongly muscle marked.

Left Proximal Phalanx, Digit III, *3.188*
1) The region for the attachment for the flexor digitorum brevis on both the medial and lateral aspects are strongly muscled marked.

Left Proximal Phalanx, Digit V, *3.190*
1) The region for the attachment for the flexor digitorum brevis on both the medial and lateral aspects are strongly muscled marked.

Rib Fragments, *3.19, 3.21, 3.63, 3.64, 3.65*
1) Fragments exhibit arthritic bony lipping.

Left First Rib, *3.71*
1) Strongly muscle marked on the inferior aspect (subclavian), on the scalene tubercle and subclavian artery region.

Thoracic (T) Vertebrae, *3.328-3.340*
T4:
1) Thoracic vertebra 4 has a degenerative disks on both the articulation of T 3 and T5. Arthritic lipping occurs on both the superior and inferior articular surfaces.
2) The superior articular surface expresses a flatting of the border or margin of the centrum, which is also eburnated, Standards code 8.5.1.
3) The articular surface for the intervertebral disk has formed an arthritic lip on the anterior border.
4) The inferior articular surface has an extended border or margin that is flattened. The arthritic bone formation has extended into the body of the intervertebral articular surface. This extended margin is also eburnated, Standards code 8.5.1.

T10:
1)There is a disk herniation of the intervertebral disks at T9 and T11. The body or centrum has also suffered from osteoarthritis on both the superior and inferior articular surfaces.

2) The superior intervertebral articular surface is arthritic. The body border or margin has extended into the articular surface. This margin has also extended away from the body, forming a flattened shelf. This shelf is eburnated, Standards code 8.5.1. In addition there is a schmorl node in the center of the centrum. The schmorl node dimensions are 9 X 3 mm. Standards code are 8.5.1 and 8.6.2.
3) Extending off the border or margin, on the left lateral aspect, just anterior from the body's/centrum's demi-facet is a large boney spicule-shelf, Standards code 8.1.3 and 8,7.2. Looking at both the right and left lateral aspects, the centrum has started to collapse on the anterior aspect. Hefting the specimen, there does not appear to be any bone loss (the weight of the bone seems normal, ruling out osteoarthritis). There is remodeled just inferior (behind) the left demi-facet.
4) The inferior articular surface of the body is much the same. The border or margin has formed an eburnated shelf, Standards code 8.5.3. There is also an arthritic extension into the intervertebral space. A schmorl node is present, the dimensions are 10 X 3 mm.

T11:
1) There are disk herniations of the intervertebral disks at T10 and T12. There are osteoarthritic

body/centrum articular surfaces on both the superior and inferior aspects.
2) The superior body/centrum articular surface has a flattened, eburnated surface, Standards code 8.5.3. There is a large spicule formation on the left lateral aspect, Standards code 8.6.2. There is moderate spicule formation on the anterior aspect. Other Standards codes include 8.1.3 and 8.1.2.
3) On the body/centrum itself, there is a bony lip that follows most of the contours of the intervertebral disk.
4) On the right and left lateral aspects, remodeled bone is evident. The right and left demi-facets also exhibit remodeled bone.

5) The inferior body/centrum articular surface is similar to the superior aspect. The arthritic formation extended even more into the intervertebral surface. The border or margin has formed a flattened, eburnated shelf, Standards code 8.5.3 and 8.6.2. There is also extensive large spicule formation are the left lateral aspect, Standards code 8.1.3.

T12:
1) Similarly the fragment of this body/centrum indicates the same as T10 and T11. Both the superior and inferior aspects have formed extended flatten border or margins. There are moderate boney spicule formation on the superior-inferior margin, Standards code 8.1.2. The inferior surface has a large spicule shelf forming on the left lateral aspect. Standards codes are 8.5.3 and 8.6.2.
2) Although fragmentary, T12 does indicate a disk herniation of the intervertebral disk at T11 and Lumbar (L) 1.
3) The left lateral aspect, demi facet is arthritic and eburnated, Standards code 8.5.3. Extensive arthritic lipping of the superior surface cane be seen.
4) The right lateral aspect, demi facet is the same and a copper stain (from a burial shroud?) is visible.

Neural Arches for T10 and T11
1) Both neural arches have boney spicule formation on the superior exterior and endo-surfaces, Standards code 8.1.3 (on the lamina for the exterior surface). These spicules have been termed "kissing spines" or spurs which are ossifying the ligament flava (Anderson 1978:5-15).

Lumbar (L) Vertebrae, *3.341-3.345*, There is a herniation of the intervertebral disks of T12 to L2 with the associated degenerative joint problems.
L1:
1) The superior aspect of L1 has an extended border or margin that is flattened and eburnated, Standards code 8.5.1. Arthritic remodeling also extends into the intervertebral disk area. There is also a moderate sized spicule formation on the anterior aspect of the vertebral body or centrum, Standards code 8.1.3.
2) Schmorl node can also be seen of the left posterior aspect with dimensions of 10 X 3 X 1.01 mm.
3) The inferior aspect has extended border or margin that is flattened and eburnated, Standards code 8.5.1.
4) The inferior aspect has arthritic remodeling of the anterior border or margin.
5) The inferior aspect, right lateral side has an extensive spicule formation, Standards code 8.1.3.

L2:
1) The superior aspect has an extended border or margin that is flattened and eburnated, Standards code 8.5.1. This extended border is greatest on the anterior aspect.
2) The superior aspect also suffers from arthritic lipping forming a shelf of bone that extends to

the right lateral and anterior aspects, Standards code 8.1.3. The are several spicules of bone extending off the left lateral and anterior aspects, Standards code 8.1.2.
3) The superior aspect has an arthritic border or margin that extends into the body or centrum articular surface.
4) The superior aspect's has schmorl nodes in the center of the body or centrum. The schmorl nodes dimensions are:

Schmorl Node #1 -- 4 X 3 X 3.43 mm
Schmorl Node #2 – 3 X 2.5 X 2.31 mm

5) The anterior aspect has two boney protuberances.
6) The right and lateral aspect, the mid region of the body has remodeled bone.
7) The inferior aspect has:
a) An extended border or margin that is flattened and eburnated, Standards code 8.5.1. This extension is greatest on the anterior aspect.
b) There is spicule formation extending off the left border or margin, Standards code 8.1.2.
c) The articular surface exhibits a slight degenerative surface, with a "pitting" on the posterior aspect.

L3:
1) The superior aspect has slight arthritic lipping and spicule formation on the left lateral - inferior region, Standards code 8.1.2.
2) The superior aspect, articular surface exhibits slight degeneration.
3) The inferior aspect, articular surface exhibits slight degeneration and slight eburnation on the body or centrum's border.
4) The vertebra is copper stained.

L4:
1) The superior aspect, articular surface exhibits slight degeneration and an arthritic bone formation.
2) A possible collapse of the anterior most portion, but the area is damaged making an assessment difficult to make.
3) The anterior aspect, right lateral aspect, there is an inferior spicule formation, Standards code 8.1.2.
4) The inferior aspect has slight degeneration of the articular surface.
5) The inferior aspect, the anterior-most portion of the border or margin is extended and flattened and eburnated, Standards code 8.5.3. This area is also copper stained.
6) The vertebra is copper stained on the anterior aspect.

L5:
1) The anterior aspect, an arthritic shelf has formed and extends both to the right and left lateral portions, Standards code 8.1.3.
2) The anterior aspect, there is slight degeneration of the body or centrum's articular surface.
3) The inferior aspect, there is slight degeneration of the body or centrum's articular surface.

Osteometrics:

Mandible, *3.1*

Buisktra & Ubelaker 1994:78	#25	23.86 mm
Buisktra & Ubelaker 1994:78	#26 Right	26.57 mm
Buisktra & Ubelaker 1994:78	#26 Left	26.96 mm
Buisktra & Ubelaker 1994:78	#27 Right	15.10 mm
Buisktra & Ubelaker 1994:78	#27 Left	15.78 mm

Osteometrics (continued):

Buisktra & Ubelaker 1994:78	#28	102.63 mm
Buisktra & Ubelaker 1994:78	#30 Right	32.95 mm
Buisktra & Ubelaker 1994:78	#30 Left	32.35 mm
Buisktra & Ubelaker 1994:78	#33 Right	73.00 mm
Buisktra & Ubelaker 1994:78	#33 Left	73.00 mm
Buisktra & Ubelaker 1994:78	#34 Right	44 degrees
Buisktra & Ubelaker 1994:78	#34 Left	49 degrees

Right Scapula, *3.16*

Bass 1995:125-129, GLP in von den Driesch 1976:75	Glenoid Cavity Length	39.60 mm
von den Driesch 1976:75	SLC	44.35 mm

Left Clavicle, *3.17*

Buisktra & Ubelaker 1994:79	#35	147.26 mm
Buisktra & Ubelaker 1994:79	#36	12.58 mm
Buisktra & Ubelaker 1994:79	#37	9.52 mm

Robust Index = 25.8046

Humeri

Rt. Humerus, *3.113*	Buikstra & Ubelaker 1994:80	#43	19.02 mm
Rt. Humerus, *3.113*	Buikstra & Ubelaker 1994:80	#44	21.90 mm

Lt. Humerus, *3.114*	Buikstra & Ubelaker 1994:80	#41	62.06 mm
Lt. Humerus, *3.114*	Buikstra & Ubelaker 1994:80	#43	20.12 mm
Lt. Humerus, *3.114*	Buikstra & Ubelaker 1994:80	#44	20.14 mm

Radii

Rt. Radius, *3.115*	Buikstra & Ubelaker 1994:80	#47	19.49 mm
Rt. Radius, *3.115*	Buikstra & Ubelaker 1994:80	#46	19.41 mm

Lt. Radius, *3.116*	Buikstra & Ubelaker 1994:80	#45	225.50 mm
Lt. Radius, *3.116*	von den Driesch 1976: 79-81	Bp	20.74 mm
Lt. Radius, *3.116*	Buikstra & Ubelaker 1994:80	#47	14.77 mm
Lt. Radius, *3.116*	von den Driesch 1976: 79-81	Bd	34.11 mm
Lt. Radius, *3.116*	Buikstra & Ubelaker 1994:80	#46	10.07 mm

Ulnae

Rt. Ulna, *3.117*	Buikstra & Ubelaker 1994:81	#50	19.35 mm
Rt. Ulna, *3.117*	Buikstra & Ubelaker 1994:81	#49	15.21 mm
Rt. Ulna, *3.117*	Buikstra & Ubelaker 1994:81	#52	41.00 mm

Lt Ulna 3.118	Buisktra & Ubelaker 1994:81	#48	246.00 mm
Lt Ulna 3.118	Buisktra & Ubelaker 1994:81	SDO	28.53 mm
Lt Ulna *3.118*	Buisktra & Ubelaker 1994:81	DPA	34.63 mm
Lt Ulna *3.118*	Buisktra & Ubelaker 1994:81	#50	15.60 mm
Lt Ulna *3.118*	Buisktra & Ubelaker 1994:81	Bd	16.56 mm
Lt Ulna *3.118*	Buisktra & Ubelaker 1994:81	#49	11.71 mm
Lt Ulna *3.118*	Buisktra & Ubelaker 1994:81	#51	218.50 mm
Lt Ulna *3.118*	Buisktra & Ubelaker 1994:81	#52	41.50 mm

Right Innominate, *3.111*

Buikstra & Ublelaker 1994:82	#57	140.00 mm

Femora

Rt. Femur, *3.119*	Buikstra & Ubelaker 1994:82-83	#66	25.64 mm
Rt. Femur, *3.119*	Buikstra & Ubelaker 1994:82-83	#67	27.66 mm
Rt. Femur, *3.119*	Buikstra & Ubelaker 1994:82-83	#68	85.00 mm
Rt. Femur, *3.119*	Buikstra & Ubelaker 1994:82-83	#64	25.08 mm
Rt. Femur, *3.119*	Buikstra & Ubelaker 1994:82-83	#65	28.66 mm

1) Platymeric Index = 87.5087, Eurymeric

Lt. Femur, *3.120*	Buikstra & Ubelaker 1994:82-83	#66	23.31 mm
Lt. Femur, *3.120*	Buikstra & Ubelaker 1994:82-83	#67	35.74 mm
Lt. Femur, *3.120*	Buikstra & Ubelaker 1994:82-83	#68	106.00 mm
Lt. Femur, *3.120*	Buikstra & Ubelaker 1994:82-83	#64	29.03 mm
Lt. Femur, *3.120*	Buikstra & Ubelaker 1994:82-83	#65	37.34 mm
Lt. Femur, *3.120*	Buikstra & Ubelaker 1994:82-83	#63	46.06 mm

1) Paltymeric Index = 77.7450, Platymeric, but skeletal element has suffered a compound fracture (healed) at the upper midshaft.

Patellae

Rt. Patella, *3.152*	von den Driesch 1976:85	GL	41.09 mm
Rt. Patella, *3.152*	von den Driesch 1976:85	GB	45.78 mm

Lt. Patella, *3.153*	von den Driesch 1976:85	GL	39.47 mm
Lt. Patella, *3.153*	von den Driesch 1976:85	GB	43.76 mm

Tibiae

Rt. Tibia, *3.121*	von den Driesch 1976:86-87	SD	19.21 mm
Rt. Tibia, *3.121*	Buikstra & Ubelaker 1994:83	#71	46.42 mm
Rt. Tibia, *3.121*	Buikstra & Ubelaker 1994:83	#73	29.36 mm
Rt. Tibia, *3.121*	Buikstra & Ubelaker 1994:83	#74	108.00 mm
Rt. Tibia, *3.121*	Buikstra & Ubelaker 1994:83	#72	30.32 mm

1) Platycnemic Index = 56.2207, Platymeric

Lt. Tibia, *3.122*	Buikstra & Ubelaker 1994:83	SD	19.14 mm

Fibulae

Rt. Fibula, *3.123*	von den Driesch 1976	Bp	28.34 mm
Rt. Fibula, *3.123*	Buikstra & Ubelaker 1994:84	#76	17.63 mm
Rt. Fibula, *3.123*	von den Driesch 1976	Bd	25.26 mm

Lt. Fibula, *3.124*	von den Driesch 1976	Bp	27.41 mm

Calcanae

Rt. Calcaneus, *3.154*	Buikstra & Ubelaker 1994:84	#77	84.98 mm
Rt. Calcaneus, *3.154*	Buikstra & Ubelaker 1994:84	#78	41.60 mm
Lt. Calcaneus, *3.174*	Buiskstra & Ubelaker 1994:84	#78	41.79 mm

Tali

Rt. Talus, *3.155*	von den Driesch 1976:91	GL	59.78 mm
Lt. Talus, *3.175*	von den Driesch 1976:91	GL	55.79 mm

Right Foot - Tarsals (von den Driesch 1976:91)

Navicular, *3.157*	GB	36.00 mm
Medial Cunnieform, *3.158*	GB	35.48 mm
Intermediate Cunnieform, *3.159*	GB	24.98 mm
Lateral Cunnieform, *3.160*	GB	23.76 mm

Left Foot - Tarsals (von den Driesch 1976:91)

Cuboid, *3.176*	GB	39.78 mm
Navicular, *3.177*	GB	34.39 mm
Medial Cunniefiorm, *3.178*	GB	35.36 mm
Lateral Cunnieform, *3.180*	GB	26.05 mm

Right Foot - Metatarsals (von den Driesch 1976:92-95)

MT I, *3.161*	GL-61.81mm	Bp-19.33mm	SD-12.75mm	Bd-22.30mm
Rt. Medial Sesmoid, *3.162*	GL - 11.61mm			
Rt. Lateral Sesmoid, *3.163*	GL-13.65mm			
MT II, *3.164*	GL-69.78mm	Bp-15.14mm	SD-7.52mm	Bd-10.30mm
MT III, *3.165*	GL-63.60mm	Bp-10.81mm	SD-7.14mm	

Right Foot - Metatarsals (von den Driesch 1976:92-95) (continued)

MT IV, *3.166*	GL-63.94mm	Bp-10.55mm	SD-7.08mm	
MT V, *3.167*	GL-62.86mm	Bp-15.16mm	SD-7.04mm	Bd-10.40mm

Right Foot - Phalanges (von den Driesch 1976:96-99)

Prox., Digit I, *3.168*		Bp-18.28mm	SD-11.28mm	
Prox., Digit II, *3.169*			SD-5.54mm	

Right Foot - Phalanges (von den Driesch 1976:96-99) (continued)

Prox., Digit III, *3.170*	GL-22.99mm	Bp-10.82mm	SD-4.77mm	
Prox., Digit V, *3.171*		Bp-10.19mm	SD-4.67mm	
Inter., Digit II, *3.172*	GL-15.06mm	Bp-8.45mm	SD-6.11mm	
Distal, Digit III, *3.173*		Bp - 8.92mm		

Left Foot - Metatarsals (von den Driesch 1976:92-95)

MT I, *3.181*	GL-64.06mm	Bp-19.55mm	SD-10.30mm	Bd-24.55mm
MT II, *3.182*	GL-71.51mm	Bp-14.07mm	SD-6.10mm	Bd-14.20mm
MT III, *3.183*	GL-65.37mm	Bp-13.24mm	SD-5.60mm	Bd-8.94mm
MT IV, *3.184*	GL-62.65mm	Bp-9.70mm	SD-4.99mm	Bd-9.33mm
MT V, *3.185*	GL-63.40mm	Bp-16.84mm		

Left Foot - Phalanges (von den Driesch 1976:96-99)

Prox., Digit I, *3.186*	GL-35.29mm	Bp-19.22mm	SD-12.12mm	Bd-15.65mm
Prox., Digit II, *3.187*	GL-31.05mm	Bp-12.13mm	SD-15.16mm	Bd-9.01mm
Prox., Digit III, *3.188*	GL-30.02mm	Bp-11.31mm	SD-5.85mm	Bd-7.65mm
Prox., Digit IV, *3.189*	GL-29.67mm	Bp-10.83mm	SD-5.87mm	Bd-7.60mm
Prox., Digit V, *3.190*		Bp-10.21mm	SD-4.80mm	
Inter., Digit II, *3.191*	GL-15.90mm	Bp-9.14mm	SD-6.58mm	Bd-7.93mm

Burial Treatment:
1) Possible use of a burial shroud and copper pins. There is copper staining on the right and left humeri; right and left radii; right and left ulnae (all aspects); thoracic vertebra 12 (T12) - right lateral aspect, demi-facet; Lumbar vertebra 3 (L3); L4 - anterior and inferior aspects; the pelves.

Taphonomy:
1) See above note in Burial treatment.

Test Trench 4

There is a possibility that the isolated remains recovered from Test Trench 4 represent three adult individuals (MNI = 3), however, these individuals are not listed in the summary table. This is because these remains are very fragmentary and not recovered in an associated context (such as Test Trench 18's "related jumble").

Possible Individual 5 - based upon *4.1*:
Sex - Female ?
1) A femoral shaft, *4.1*, as compared to Amorosi reference cast 3-828.
Age at death - Mature Adult range
1) Based upon developmental morphology.

Stature, Ethnicity - Indeterminate

Taphonomy:
1) The femoral shaft had suffered a postmorten green fracture, Standards code 5.1.2.
2) There is also a postmorten, weathered surface, rated on the Behrensmyer (1978) scale of stages 1-2.

Possible Individual 6 - based upon *4.2, 4.6.1, 4.6.2, 4.8*:
Sex - Male?, but within male/female overlap range
1) Articular Width (Bass 1995:159; France 1983, 1985) is 1.5375, which falls above the cutoff of 1.51 at an 92% confidence level.
2) Diaphyial (Bass 1995:160; France 1983,1985) is .3000, which fall below the cutoff of 1.474 at an 88.55% confidence level.

Age at death - Mature Adult Range
1) Based upon developmental morphology

Stature, Ethnicity - Indeterminate

Osteometrics:
Humerus, *4.2*

Buikstra & Ubelaker 1994:80	#41	64.72 mm
Buikstra & Ubelaker 1994:80	#43	23.75 mm
Buikstra & Ubelaker 1994:80	#44	25.29 mm

Right Tibia Shaft, *4.6.1*

von den Driesch 1976:86-87	SD	21.55 mm
Buikstra & Ubelaker 1994:83	#73	36.05 mm
Buikstra & Ubelaker 1994:83	#74	105.00 mm
Buikstra & Ubelaker 1994:83	#75	25.97 mm

Platycnemic Index = 48.7, Hyperplatycnemic

Left Tibia Shaft, *4.6.2*

von den Driesch 1976:86-87	SD	20.12 mm
Buikstra & Ubelaker 1994:80	#73	25.65 mm
Buikstra & Ubelaker 1994:80	#74	103.00 mm
Buikstra & Ubelaker 1994:80	#72	25.86 mm

Platycnemic Index = 51.1, Hyperplatycnemic

Right Fibula Shaft, *4.8*

Buikstra & Ubelaker 1994:80	#76	13.40 mm

Pathology and Variation:
Right Humerus, *4.2*
1) The proximal end, on the anterior aspect exhibits two foramina-like lesions. One lesion is above the other lesion on the interbercular sulcus. The proximal foramen dimensions are 2 X 2mm. The distal foramen dimensions are 2 X 1 mm.

2) There is also a healing infection extending on the proximal 1/3 of the deltoid tuberosity, Standards code 4.1.2 and 4.6.1.
3) There is a circular depression lesion on the central portion of the capitulum. The depression dimensions are 6.5 X 7 mm.

Right Fibula Shaft, *4.8*
1) The interosseus crest is strongly muscle marked.

Possible Individual 7 - based upon *4.7*
Sex - Female ?
1) 1) A tibia shaft, *4.7*, as compared to Amorosi reference cast 3-828.

Age at death - Mature Adult Range
1) Based upon developmental morphology

Stature, Ethnicity - Indeterminate

O**steometrics:**
Left Tibia Shaft, *4.7*

von den Driesch 1976	SD	22.51 mm
Buikstra & Ubelaker 1994:84	#74	194.00 mm
Buikstra & Ubelaker 1994:84	#72	23.77 mm
Buikstra & Ubelaker 1994:84	#73	29.56 mm

Platycnemic Index: 86.1839, Eurycnemic

Test Trench 18

Individual 5 - is based upon *18.15-18.30*
Sex - Female:
1) Right temporal, *18.24*, mastoid process is scored as a 1 in the Standards codes.
2) Right innominate, *18.30.7*
  a) Greater sciatic notch, Standards code 2, female
  b) Preauricular sulcus, Standards code 2, female
3) Sternum, *18.30.15*, sternal length is 128.27 mm., which falls below the <140 mm. proposed by Bass (1995:117-118), indicating that the individual is female.

Age at Death - Mature Adult Range:
1) Based upon developmental morphology

Stature, Ethnicity - Indeterminate

Osteometrics:
Right Scapula, *18.30.2*

Bass 1995:125-129, GLP in von den Driesch 1976:75	Glenoid Cavity Length	-
von den Driesch 1976:75	SLC	38.97 mm

Left Scapula, *18.30.1*

Bass 1995:125-129, GLP in von den Driesch 1976:75	Glenoid Cavity Length	34.50 mm
von den Driesch 1976:75	SLC	36.99 mm

Right Radial Shaft, *18.30.4*

Buikstra & Ubelaker 1994:80	#47	12.43 mm
Buikstra & Ubelaker 1994:80	#46	12.43 mm

Right Ulna, *18.30.5*

Buikstra & Ubelaker 1994:81	#50	14.51 mm
von den Driesch 1976:79-81	Bd	14.77 mm
Buikstra & Ubelaker 1994:81	#49	11.74 mm
Buikstra & Ubelaker 1994:81	#51	220.02 mm
Buikstra & Ubelaker 1994:81	#52	38.00 mm

Caliber Index = 17.2711, exceeding Bass' (1995:174) South German cutoff.

Sternum, *18.30.15*

Bass 1995:117-118	S1	28.41 mm
Bass 1995:117-118	S2	27.28 mm

Sternum, *18.30.15* (continued)

Bass 1995:117-118	S3	29.18 mm
Bass 1995:117-118	M-B Length	128.27 mm

Right Metatarsal V, *18.27*

von den Driesch 1976:92-95	SD	10.43 mm

Pathology and Variation:

Scapulae, *18.30.1 to 18.30.2*

1) Both the right and left scapular notches are scored as a "medium" (Bass 1995:125).

Right Innominate, *18.30.7*

This innominate has suffered from a series of episodal insults.

1) The auricular surface: The superior demiface exhibits a "pit-like" lesion. The lesion's walls are smooth, indicating a longer term process of formation. The lesion might be the result from a difficult birthing episode. The lesion is deep, with a dimension of 9.22 X 4.63 X 4.44 mm. The lesion's position on the innominate is aligned with the apex of the auricular surface.

2) The lesion is large enough to have modified the superior demiface and rectoauricular area of the iliac tuberosity. The auricular surface of the associated Sacrum's S1 vertebra matches the Ilium's auricular surface. This "pit-like" lesion is immediately superior (just above) this articulation.

3) The iliac blade, immediately posterior of the anterior gluteal line is another "pit-like" lesion. This lesion is similar to what is illustrated in White and Folkens (2000, Figure 11.7; 2005). Although not a foramen for an artery or vein. The lesion is a pit with smooth walls, indicating a longer term formation process. The lesion may also be related to a difficult birthing episode. The lesion's dimensions are 2.79 X 2.65 X 3.05 mm. The diameter of the lesion is 2.71 mm. (or a #36 Imperial drill bit .106" - inch).
4) Possibly related to the above birthing episode is another artery or vein feature on the iliac fossa, medial aspect. This foramen has an associated cannel extending superiorly and toward the auricular surface. The dimensions are .60 X .23 X 2.91mm with a diameter of 1.94 mm. (or a #48 Imperial drill bot, .076"). The associated cannel dimensions are 14.12 X 1.66 (at the widest) X .59 mm. The cannel is "U" shaped, but inverted and actually leads to the articular surface.
5) The acetabulum floor exhibits a heavily remodeled lesion set of the Ilium portion. The area has a series of three nodes of woven bone, indicating a dislocation of the ligament teres femoris. Either this dislocation is the result of a birthing episode experienced on the auricular surface and ilium blade or another traumatic injury.
6) Although there is mechanical damage (from current construction excavation) the lip of the acetabulum and the ischial portion has remodeled bone. This area is immediately inferior to the lip and superior to the ischial tuberosity.

Thoracic Vertebrae
1) Thoracic Vertebra 11 (*18.19.7*, T11) might exhibits a schmorl node on the inferior articular surface of the body or centrum, however, the fragment was damaged (by current construction)
2) T12 (*18.19.8*)exhibits a degenerative inferior articular surface.
3) The neural arches for T9 to T12 (*18.21.5 to .8*) exhibit the ossification of the ligament flava forming spurs or what has been termed as "kissing spine" (Andersen 1978:5-15, Figures D and E).

Lumbar Vertebrae
1) Lumbar vertebra 1 and 2 (18.20.1 & .2, L1 & L2) body of centrum indicate a degenerative herniated disk between these two vertebrae, however, both fragments are damaged.

Individual 6 - is based upon *18.30.3*, Right Humerus.
Sex - Male
1) Articular width (Bass 1995: 159, France 1983, 1985) is 2.4841, which is above the 1.51 with a confidence level of 92%.

Age at death - Mature Adult Range
1) Based upon developmental morphology

Stature, Ethnicity - Indeterminate

Osteometrics:
Right Humerus, *18.30.3*

Buiskstra & Ubelaker 1994:80	#43	20.47 mm
Buikstra & Ubelaker 1994:80	#44	17.23 mm
Bass 1995:159	b	34.33 mm

Isolated Remains that have a Pathological or Variation of note:

There are several skeletal elements that from a pathological of variation perspective that are import.

1) Test Trench 18, 1*8.3*, left radius. This is a massive radius that is strongly muscle marked along the interosseus crest. The size of this skeletal element suggests that the individual was male.

2) Test Trench 18, 18.6, a fragmentary proximal phalanx from digit III. There is a strongly muscle marled palmar surface for the flexor digitorum superficial.

Table 1. Catalog of Isolated Human Remains Recovered from WSPPF 2007 to 2008 (Identified in Lab)

TEST TRENCH 3, Individual 2 – Numbers 3.1 - 3.323 is assigned to one individual (MNI = 1), male > 35 -40 years.

3.1 --Mandible.
3.2 --Upper right incisor 2 (#7).
3.3 --Upper right premolar 3 (#5).
3.4 --Upper right premolar 4 (#4).
3.5 --Left fragmentary frontal bone.
3.6 --Right fragmentary parietal, posterior portion.
3.7 --Left temporal and petrous portion.
3.8 --Right temporal fragment and petrous portion.
3.9 --Indeterminate mastoid fragment.
3.10 --Right and left parietal fragments, anterior sagittal region.
3.11.1-2 --Two fragments from the endocranial surface of the orbital roof.
3.12 .1 --Right portion of the foramen magnum.
3.12.2.1-10 --Ten indeterminate occipital fragments.
3.12.3.1-2 --Two indeterminate nuchal fragments.
3.13.1-6 --Six indeterminate cranial fragments.
3.14 --Left partial maxillary (orbital floor) and zygomatic (orbital area).
3.15 --Left scapula acromion process, spine and scapula neck fragment.
3.16 --Right scapula acromion process, spine, glenoid cavity, neck and auxiliary border.
3.17 --Left clavicle.
3.18 --Right first rib.
3.19 --Right rib head and articular surface, possibly rib #6.
3.20 --Right rib angle, possibly rib #11.
3.21 --Right rib head and articular surface, possibly rib #7 or #8.
3.22 to 3.28 --Seven fragmentary rib heads that could not be assigned to side or position.
3.29 to 3.48 --Twenty fragmentary rib shafts, approximate mid-shaft position, position could not be assigned.
3.49 --One fragmentary anterior rib shaft, position could not be assigned.
3.50 --One sternal, anterior rib fragment.
3.51 --One sternal, anterior rib fragment.
3.52 --One sternal, anterior rib fragment.
3.53 --One sternal, anterior rib fragment.
3.54 --One sternal, anterior rib fragment.
3.55 – One right rib angle fragments.
3.56 – One right rib angle fragments, possibly rib #9 or #10.
3.57 – One right rib angle fragments, possibly rib #6 or #7.
3.58 — One right rib body fragments, possibly rib #8 to #10.
3.59 – One right rib body fragments, possibly rib #8 to #10.
3.60-- One right rib body fragments, possibly rib #8 to #10.
3.61 – One right rib body fragments, possibly rib #7 to #10.
3.62. – One right rib body fragments, possibly rib #7 to #11.
3.63 – One right rib body fragments, possibly rib #7 to #11.
3.64 – One right rib body fragments, possibly #7 to # 10.

Table 1. Catalog of Isolated Human Remains Recovered from WSPPF 2007 to 2008 (Identified in Lab) (continued)

3.65 – One right rib body fragment, possibly #6 to #10.
3.66 – One right rib body fragment.
3.67 – One right rib body fragment, rib #3.
3.68 -- One right rib body fragment, rib #4.
3.69 – One right rib body fragment, rib #5.
3.70 -- One right rib body fragment, rib #6.
3.71 – Left first rib
3.72 – One left rib head, possibly rib #4.
3.73 – One left rib head, possibly rib #5 or #6.
3.74 – One left rib head, possibly rib #6 or #7.
3.75 – One left rib head, possibly rib #7 or #8.
3.76 – One left rib head, possibly rib #8 or #9.
3.77 – One left rib head, possibly rib #9 or #10.
3.78 – One left rib head, possibly rib #10 or #11.
3.79 – One left rib head, possibly rib #10 or #11.
3.80 – One left rib body fragment, possibly rib #7 to #10.
3.81 – One left rib body fragment, possibly rib #7 to #10.
3.82 – One left rib body fragment, possibly rib #7 to #10.
3.83 – One rib head and neck fragment.
3.84 – One right lunate.
3.85 – One right triquetral.
3.86 – One right trapezium.
3.87 – One right capitate.
3.326 – One right hamate.
3.88 – Right metacarpal I.
3.89 – Right metacarpal II.
3.90 – Right metacarpal III.
3.91 – Right metacarpal IV.
3.92 – Right metacarpal V.
3.93 – Right proximal phalanx, digit I.
3.94 – Right proximal phalanx, digit II.
3.95 – Right proximal phalanx, digit III.
3.96 – Right proximal phalanx, digit IV.
3.97 – Right proximal phalanx, digit V.
3.98 – Right distal phalanx, digit I.
3.99 – Right intermediate phalanx, digit II.
3.100 – Right intermediate phalanx, digit III.
3.101 – Right distal phalanx, digit II.
3.102 – Left metacarpal I.
3.103 – Left metacarpal II.
3.104 – Left metacarpal III.
3.105 – Left metacarpal IV.
3.106 – Left proximal phalanx, digit I.
3.107 – Left proximal phalanx, digit II.

Table 1. Catalog of Isolated Human Remains Recovered from WSPPF 2007 to 2008 (Identified in Lab) (continued)
Individual 2. (continued)

3.108 – Left distal phalanx, digit I.
3.109 – Left intermediate phalanx, digit II.
3.110 – Left distal phalanx, digit III.
3.111 – Right innominate.
3.112 – Left innominate.
3.113 – Right humerus.
3.114 – Left humerus.
3.115 – Right radius.
3.116 – Left radius.
3.117 – Right ulna.
3.118 – Left ulna.
3.119 – Right femur.
3.120 – Left femur.
3.121 – Right tibia.
3.122 – Left tibia.
3.123 – Right fibula.
3.124 – Left fibula.
3.125 – Humeral head fragment.
3.126 – Humeral head fragment.
3.127 – Femoral shaft fragment.
3.128 – Femoral shaft fragment.
3.129 – Femoral shaft fragment.
3.130 – Femoral shaft fragment.
3.131 – Femoral shaft fragment.
3.132 – Femoral shaft fragment.
3.133 – Femoral shaft fragment.
3.134 – Femoral shaft fragment.
3.135 – Femoral shaft fragment.
3.136 – Femoral shaft fragment.
3.137 – Femoral shaft fragment.
3.138 – Femoral shaft fragment.
3.139 – Left proximal femoral fragment, lesser trochanter region.
3.140 - Right proximal femoral fragment, lateral portion of the greater trochanter.
3.141 - Right distal femur, lateral condyle fragment.
3.142 – Right distal femur, lateral condyle fragment.
3.143 – Right distal femur, medial condyle fragment.
3.144 – Right distal femur, medial condyle fragment.
3.145 – Right distal femur, patella articular surface.
3.146 – Tibia fragment, proximal end.
3.147 – Tibia fragment, proximal end.
3.148 – Right proximal tibia, medial fragment.
3.149 – Right proximal tibia, lateral fragment.
3.150 – Right proximal tibia, lateral fragments.
3.151 – Right proximal tibia, central fragment.

Table 1. Catalog of Isolated Human Remains Recovered from WSPPF 2007 to 2008 (Identified in Lab) (continued)
Individual 2. (continued)

3.152 – Right patella.
3.153 – Left patella.
3.154 – Right calcaneus.
3.155 – Right talus.
3.156 - Right cuboid.
3.157 – Right navicular.
3.158 – Right medial (first) cunieform.
3.159 – Right intermediate (second) cunieform.
3.160 – Right lateral (third) cunieform.
3.161 - Right metacarpal I.
3.162 – Right medial sesmoid for metacarpal I.
3.163 – Right medial sesmoid for metacarpal I.
3.164 – Right metatarsal II.
3.165 – Right metatarsal III.
3.166 – Right metatarsal IV.
3.167 – Right metatarsal V.
3.168 – Right proximal phalanx, digit I.
3.169 – Right proximal phalanx, digit II.
3.170 – Right proximal phalanx, digital III or IV.
3.171 – Right proximal phalanx, digit V.
3.172 – Right proximal phalanx, digit II.
3.173 – Distal phalanx, digit III.
3.174 – Left calcaneus.
3.175 – Left talus.
3.176 – Left cuboid.
3.177 – Left navicular.
3.178 – Left medial (first) cunieform.
3.179 – Left intermediate (second) cunieform.
3.180 – Left lateral (third) cunieform.
3.181 – Left metatarsal I.
3.182 – Left metatarsal II.
3.183 – Left metatarsal III.
3.184 – Left metatarsal IV.
3.185 – Left metatarsal V.
3.186 – Left proximal phalanx, digit I.
3.187 – Left proximal phalanx, digit II.
3.188 – Left proximal phalanx, digit III.
3.189 – Left proximal phalanx, digit IV.
3.190 – Left proximal phalanx, digit V.
3.191 – Left intermediate phalanx, digit II.
3.192 – Left intermediate phalanx shaft.
3.193 to 3.200 – Eight indeterminate fragments.
3.201 to 3.301 – One hundred (100) long bone shaft fragments.
3.302 to 3.304 - Three thoracic vertebrae fragments.

Table 1. Catalog of Isolated Human Remains Recovered from WSPPF 2007 to 2008 (Identified in Lab) (continued)
Individual 2. (continued)
3.305 to 3.306 – Two cervical vertebrae fragments.
3.307 to 3.325 – Nineteen innominate fragments.
3.326 – Right half of the atlas.
3.327 – Cervical neural spine, C4-C5.
3.328 – Indeterminate transverse process.
3.329 – Indeterminate body/centrum fragment.
3.330 – Neural arch, Thoracic vertebra 1 (T1).
3.331 – Neural arch, T8.
3.332 – Neural arch, T9.
3.333 – Neural arch T10.
3.334 – Neural arch, T12.
3.335 – Neural arch, T11.
3.336 – Body/centrum, T1.
3.337 – Body/centrum, T4.
3.338 – Body/centrum, T10.
3.339 – Body/centrum, T11.
3.340 – Body/centrum, T12.
3.341 – Lumbar vertebra 1 (L1).
3.342 – Lumbar vertebra (L2).
3.343 – Lumbar vertebra (L3).
3.344 – Lumbar vertebra (L4).
3.345 – Lumbar vertebra (L5).
3.346 – Sacral Vertebrae 4 (S4).
3.347 – Sacral Vertebrae (S5).
3.348 – Coccygeal Vertebrae (C1).

Test Trench 4
4.1 – Femoral shaft, adult age range, female ?.
4.2 – Right humerus, adult age range.
4.3 -- Distal femoral shaft fragment, mature adult age range.
4.4 – Lesser femoral trochanter tubercle fragment, adult age range.
4.5 – Distal ?, femoral shaft fragment.
4.6.1 – Right tibia shaft, mature adult age range, male ?.
4.6.2 – Left tibia shaft, mature adult age range, male ?.
4.7 – Left tibia shaft, mature adult age range, female ?.
4.8 – Right fibula shaft, mature adult age range, male.
4.9 – First sacral vertebrae fragment, superior articular facet, adult age range.
4.10 – Anterior portion of a rib shaft, possibly #7, adult age range.
4.11 – Metapodial shaft fragment, adult age range.
4.12 – Metapodial shaft fragment, adult age range.
4.13 – Distal ulna shaft fragment, adult age range.
4.14 – Left proximal phalanx, digit I, mature adult age range.
4.15. 1 - 8 - Eight long bone shaft fragments.

Table 1. Catalog of Isolated Human Remains Recovered from WSPPF 2007 to 2008 (Identified in Lab) (continued)

Test Trench 14
14.1 – Metapodial shaft fragment, metatarsal ?, adult age range.
14.2 – Metapodial shaft fragment, metatarsal ?, adult age range.
14.3. 1-14 – Fourteen long bone shaft fragments.
14.4 – Left lower molar 3 (#17), mature adult age range.
14.5 – Six iron (coffin?) nails
14.6 – Distal ulna shaft, adult age range.
14.7. 1-4 – Four long bone shaft fragments.
14.8.1 -- Distal articular surface of metatarsal I, adult age range.
14.8.2 – Distal shaft of metacarpal I, adult age range.
14.8.3 – Distal shaft of metacarpal II, adult age range.
14.8.4 – Distal shaft of metatarsal III, adult age range.
14.8.5 – Distal shaft of metatarsal IV, adult age range.
14.8.6 – Distal shaft of metatarsal V, adult age range.

Test Trench 18
18.1 – Innominate fragment, Ilium blade?, Adult age range.
18.2 – Right femur, missing proximal and distal ends, mature adult age range, male ?.
18.3 – Left radius, missing distal end, mature adult age range, male.
18.4 – Left proximal metatarsal III, adult age range, female ?.
18.5 – Two iron (coffin?) nails.
18.6 – Proximal phalanx, digital III, mature adult age range.
18.7 – Anterior rib shaft fragment, possibly #7 or #8, adult age range.
18.8 – Anterior rib shaft fragment, possibly #7 or #8, adult age range.
18.9 – Right proximal femur, mature adult age range.
18.10 – Fragmentary calcaneus, mature adult age range.
18.11 – Left femoral shaft, mature adult age range, male ?
18.12 – Left humerus, mature adult age range.
18.13.1-2 – Two ilium fragments, adult age range.
18.14.1-7 – Seven wood fragments (coffin wood?).

18.15 to 18.30 represent two individuals (MNI = 2). 18.15-18.30 (Individual 5) is a Mature Adult Range, Female. 18.30.3 (Individual 6) is a Mature Adult Range, Male.
18.15.1. 1-14 – Fourteen mid shaft rib fragments, adult age range.
18.15.2 -- Right rib, possibly #6 to #8, adult age range.
18.15.3 – Left first rib, mature adult age range, male?.
18.15.4 – Left second rib, mature adult age range, sex indeterminate.
18.15.5. 5-11 – Seven rib fragments.
- 18.15.5.5 – Right rib head, #12.
- 18.15.5.6 – Right rib head, #7.
- 18.15.5.7 – Right rib head, #6.
- 18.15.5.8 – Right rib head, #5.

Table 1. Catalog of Isolated Human Remains Recovered from WSPPF 2007 to 2008 (Identified in Lab) (continued)

Test Trench 18 (continued)

18.15.5.9 – Right rib head, #4.
18.15.5.10 – Left rib head, #10.
18.15.5.11 – Left rib head, possibly #5 to #7.
18.16. 1-3 – Three iron (coffin ?) nails.
18.17. 1-38 – Thirty-Eight wood (coffin) fragments, pine.
18.18 – Thoracic vertebrae body fragments, mature adult age range:
18.18.1 – Body fragment.
18.18.2 – Body fragment.
18.18.3 – Body fragment.
18.18.4 – Body fragment.
18.18.5 – Body fragment.
18.18.6 – Body fragment.
18.18.7 – Body fragment.
18.18.8 – Body fragment.
18.19 – Thoracic vertebrae body fragments, anterior most portion, mature adult age range:
18.19.1 – Body fragment.
18.19.2 – Body fragment
18.19.3 – Body fragment
18.19.4 – Body fragment, T8.
18.19.5 - Body fragment, T9.
18.19.6 - Body fragment, T10.
18.19.7 – Body fragment, T11.
18.19.8 - Body fragment, T12.
18.20 - Lumbar vertebrae body fragments
18.20.1 – Body fragment, L1.
18.20.2 - Body fragment, L2.
18.21 - Thoracic vertebrae, neural arches
18.21.1 – Neural arch, T1.
18.21.2 -- Neural arch, T2.
18.21.3 – Neural arch, T3.
18.21.4 – Neural arch, T8.
18.21.5 – Neural arch, T9.
18.21.6 – Neural arch, T10.
18.21.7 – Neural arch, T11.
18.21.8 – Neural arch, T12.
18.22 - Lumbar vertebrae, neural arches
18.22.1 – Neural arch, L5.
18.22.2 – Neural arch, zygophysis.
18.22.3 – Neural arch, left transverse process, L4.
18.22.4 – Neural arch, left transverse process, L2.
18.23 – Sacral neural arches, S1-S2.
18.24 – Right temporal, mature adult age range, female.
18.24.1 – temporal

Table 1. Catalog of Isolated Human Remains Recovered from WSPPF 2007 to 2008 (Identified in Lab) (continued)

Test Trench 18 (continued)

18.24.2 – incus
18.24.3 – mastoid fragment
18.24.4 – mastoid fragment
18.25 - Long bone fragment
18.26 – Left (?) proximal fibula, adult age range.
18.27 – Right metatarsal V, mature adult age range.
18.28 – Partial radial head, adult age range.
18.29 – Distal metapodial articular surface, female ?.
18.30.1 – Left scapula, mature adult age range.
18.30.2 – Right scapula, mature adult age range.
18.30.3 – Right humerus, mature adult age range, male (Individual 6).
18.30.4 – Right radial shaft, mature adult age range.
18.30.5 – Right ulna, mature adult age range.
18.30.6 – First sacral vertebrae, mature adult age range.
18.30.7 – Right innominate, mature adult age range, female.
18.30.8 – Lumbar vertebra, L3, mature adult age range.
18.30.9 – Anterior rib fragment, adult age range.
18.30.10 – Left rib head, neck and tubercle, #4, mature adult age range.
18.30.11 – Right rib tubercle and midshaft, possibly #5-#8, mature adult age range.
18.30.12 – Proximal tibia shaft, mature adult age range.
18.30.13 – Tibia shaft fragment, mature adult age range.
18.30.14.1-4 – Four wood (coffin) fragments, pine.
18.30.15 – Sternum, mature adult age range, female.

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France Casting:

Casts and Information concerning these forensic cast series are available from France Casting (D. France, Ph.D.), 1713 Willox Court Unit A, Fort Collins, Co. 80524, tel: (970) 221-4044, www.francecasts.com. All SA, CS and PI codes are from France Casting.

Age Determination Series for *Os Pubis*, Rib and Long Bones:
1 - SA003 - Suchey-Webb Epiphyseal Union Age Determination Casts.
2 - SA001 - Suchey-Brooks Male Pubic Age Determination Casts.
3 - SA002 -Suchey-Brooks Female Pubic Age Determination Casts.
4 - SA009 - Variations in the Female Os Pubis: Age, Trauma, Pathology Casts.
4 - SA004 - Suchey-Sutherland Pubic Sex Determination Casts.
5 - SA100 - Íşcan Rib Phase Casts.

Age Estimation Series from Developmental Casts:
1 - CS007 - (Amorosi Ref. Collection: 3-1905) - Skull and Mandible of a Full Term Infant.
2 - PI001 - (Amorosi Ref. Collection: 3-1542) - Postcrania of a Full Term Infant.
3 - SA 300 - Infant Postcrania, aged .5-1.5 years at death.
4 - SA 301 - Infant Crania and Postcrania, aged 1-2 years at death.
5 - SA 302 - Juvenile Crania and Postcrania, aged 7.5-8.5 years at death.
6 - SA 303 - Juvenile Postcrania, aged 15-19 years at death.
7 - SA 304 - Right Humerus, aged in the mid teens at death.
8 - SA 305 - Right Humerus, aged in the late teens at death.
9 - SA 200A - Cut away Maxillary and Mandible, 6 years at death.
10 - SA 200B - Cut away Maxillary and Mandible, 10 years at death.
11 - CS007, SA008 - Occipital Bone Development Series.

Sex Estimation Series from Pelves
RI 003 - Male, right and left innominates and sacrum
RI 005 - Female, right and left innominates and sacrum

Skulls of Known European Ancestry:
1 - CS 011 - Male, 40 years at death, from Maxwell Museum, Albuquerque, N.M.
2 - CS 018 - Male, 55 years at death.
3 - CS 109 - Female, Adult.

Skulls of Known African Descent
1 - CS 119 - Female, Mature Adult
2 - CS 108 - Male, Mature Adult

Skulls of Known Native American Descent
1 - CS 001 - Male, Pueblo
2 - CS 024 - Female, California
3 - CS 030 - Male, Alaska
4 - CS 029 - Male, Alaska

Somso Modern Human Casts Series:
1 - Crania and Postcrania (Amorosi Ref. Collection: 3-828), European descent, Male, ≥ 35 years at death.

Bone Clones Osteological Reproductions:
Cast and information concerning these forensic casts are available from Bone Clones, Inc, 21416 Chase St. Unit #1, Canoga Park, Ca. 91304, tel: (818) 709-7991, www.info@boneclones.com :

All COMP, KO and SCM codes are from Bone Clones.

1 - COMP 105 - Comparative Maxilla series, includes an Asian descent male, ≥35 years at death, an African descent male, ≥21 -≤35 years at death, and a European descent male, ≥ 35 years.
2 - KO-328 - Postcrania, aged at 4 fetal months at death.
3 - KO-325 - Postcrania, age at 4.5 fetal months at death.
4 - KO-389 - Postcrania, aged at 5 fetal months at death.
5 - KO-381 - Postcrania, aged at 6 fetal months at death.
6 - KO-374 - Postcrania, aged at 7 fetal months at death.
7 - KO-366 - Postcrania, aged at 8 fetal months at death.
8 - KO-358 - Postcrania, aged at 9 fetal months at death.
9 - KO-350 - Postcrania, aged at Full Term Infant at death.
10 - SCM-186-D - Crania and Postcrania of a Full Term Infant at Death, cast from the Maxwell Museum, Albuquerque, N.M.