

APPENDIX
D. ANALYSIS OF HUMAN SKELETAL REMAINS FROM
SCATTERED VILLAGE, SITE 32MO31.

Burial No. 2

damaged skull	damaged mandible	(2) fragmentary cervical vertebrae
(10) fragmentary thoracic vertebrae	(5) fragmentary lumbar vertebrae	(3) left rib fragments (25) rib fragments damaged
left clavicle	fragmentary right clavicle	left radius left ulna
fragmentary right radius	damaged right ulna	right hamate left lunate
left no. 1 metacarpal	right nos. 1-4 metacarpals	(3) proximal carpal phalanges
(1) middle carpal phalanx	(1) distal carpal phalanx	fragmentary left os coxae
fragmentary right os coxae	left femur	right femur
damaged left patella	right patella	damaged left tibia right tibia
(3) fibula fragments	(1) proximal tarsal phalanx	damaged right calcaneus
damage left talus	right talus	

Burial No. 3

damaged skull	fragmentary C1	(2) centra
fragmentary right scapula	fragmentary left humerus	damaged left radius
fragmentary left ulna	fragmentary left os coxae	fragmentary right os coxae
damaged left femur	fragmentary right femur	damaged right patella
damaged left tibia	fragmentary right tibia	damaged fibula shaft
fragmentary left calcaneus	damaged right calcaneus	left talus
fragmentary right talus	(15) unidentified fragments	

Burial No. 4

fragmentary cranium	damaged sacrum	(7) rib fragments
fragmentary left clavicle	fragmentary left scapula	fragmentary left radius
fragmentary left humerus	damaged left os coxae	fragmentary right os coxae
damaged left femur	fragmentary right femur	fragmentary left tibia
fragmentary right tibia	fragmentary fibula shaft	(7) metatarsals
(6) proximal tarsal phalanges	damaged right calcaneus	damaged left navicular left cuboid

Burial No. 5

cranium	mandible	hyoid
(7) cervical vertebrae	(12) thoracic vertebrae	(5) lumbar vertebrae sacrum
(9) left ribs	(9) right ribs	sternum left clavicle
right clavicle	damaged left scapula	fragmentary right scapula
left humerus	right humerus	left radius right radius
left ulna	right ulna	(5) left metacarpals
(5) right metacarpals	(4) left proximal carpal phalanges	(1) fragmentary proximal carpal phalanx
(3) middle carpal phalanges	(3) middle carpal phalanges	(1) fragmentary middle carpal phalanx
(6) fragmentary distal carpal phalanges	left os coxae	right os coxae left femur
right femur	left patella	right patella left tibia
right tibia	left fibula	right fibula
(4) left metatarsals	(4) right metatarsals	(4) proximal left tarsal phalanges
(4) proximal right tarsal phalanges	(3) fragmentary middle tarsal phalanges	
(1) fragmentary distal tarsal phalanx	(1) distal right tarsal phalanx.	(5) left carpals (5) right carpals
(5) left tarsals	(6) right tarsals	

Burial No. 6

cranium	damaged mandible	(7) damaged cervical vertebrae
(12) damaged thoracic vertebrae	(5) damaged and fragmentary lumbar vertebrae	fragmentary sacrum
(12) left ribs	(12) right ribs	damaged left clavicle right clavicle
fragmentary left scapula	fragmentary right scapula	left humerus right humerus
left radius	damaged right radius	fragmentary left ulna right ulna
(2) left carpals	(6) right carpals	(7) fragmentary metacarpals
(5) proximal carpal phalanges	(1) middle carpal phalanges	(2) distal carpal phalanges
damaged left os coxae	damaged right os coxae	left femur right femur
damaged left patella	left tibia	right tibia
fragmentary left fibula	fragmentary right fibula	(2) left tarsals (4) right tarsals
(7) fragmentary metatarsals	(34 rib fragments)	

Burial No. 7

fragmentary cranium	fragmentary mandible	#1 cervical vertebra	
#2 cervical vertebra	(2) cervical vertebrae	(2) lumbar vertebrae	(1) left rib
(7) right ribs	sternum	left clavicle	
fragmentary left humerus	fragmentary right humerus	left radius	
fragmentary right radius	right ulna	(3) left carpals	
(1) right carpals	(5) left metacarpals	(5) right metacarpals	
(8) proximal carpal phalanges	(5) middle carpal phalanges	(1) distal carpal phalanx	
fragmentary left os coxae	right os coxae	damaged left femur	right femur
right patella	left tibia	right tibia	left fibula
right fibula	(7) left tarsals	(7) right tarsals	(5) left metatarsals
(5) right metatarsals	(10) proximal tarsal phalanges	(24) fragments	

Burial No. 8

fragmentary cranium	mandible	#2 cervical vertebra	
(5) cervical vertebrae	(10) thoracic vertebrae	(2) lumbar vertebrae	sacrum
(12) damaged left ribs	(12) damaged right ribs	(14) rib fragments	sternum
left clavicle	right clavicle	left scapula	right scapula
damaged left humerus	damaged right humerus	fragmentary left radius	
fragmentary right radius	damaged left ulna	fragmentary right ulna	(1) left carpal
(2) right carpals	(7) fragmentary metacarpals	(7) proximal carpal phalanges	
(4) middle carpal phalanges	(4) distal carpal phalanges	damaged left os coxae	
damaged right os coxae	left femur	right femur	left patella
right patella	left tibia	right tibia	left fibula
right fibula	(7) left tarsals	(7) right tarsals	
(7) fragmentary metatarsals	(10) proximal tarsal phalanges	(7) middle tarsal phalanges	
(4) distal tarsal phalanges			

Burial No. 9

damaged cranium	damaged mandible	damaged #2 cervical vertebra	
(1) cervical vertebra	(6) fragmentary cervical vertebrae	(9) thoracic vertebrae	
(3) lumbar vertebrae	sacrum	(5) damaged left ribs	
(27) rib fragments	damaged left clavicle	fragmentary left scapula	
fragmentary right scapula	left humerus	right humerus	left radius
right radius	left ulna	damaged right ulna	(1) left carpal
(2) right carpals	(2) left metacarpals	(3) right metacarpals	
(3) proximal carpal phalanges	(1) middle carpal phalanges	damaged left os coxae	
fragmentary right os coxae	left femur	right femur	left patella
right patella	left tibia	right tibia	left fibula
right fibula	(6) left tarsals	(7) right tarsals	
(4) left metatarsals	(4) right metatarsals	(4) proximal tarsal phalanges	
(8) middle tarsal phalanges	(1) distal tarsal phalanges	(24) fragments	

Burial No. 10

cranium	mandible	damaged hyoid	
(7) cervical vertebrae	(12) thoracic vertebrae	(5) lumbar vertebrae	sacrum
(12) left ribs	(12) right ribs	(4) rib fragments	sternum
left clavicle	right clavicle	left scapula	right scapula
left humerus	right humerus	left radius	right radius
fragmentary left ulna	right ulna	(4) left carpals	(4) right carpals
(4) left metacarpals	(4) proximal carpal phalanges	(3) middle carpal phalanges	
left os coxae	damaged right os coxae	left femur	
damaged right femur	right patella	damaged left tibia	
damaged right fibula	(2) left tarsals	(5) right tarsals	
(5) right metatarsals	(3) proximal tarsal phalanges	(2) middle tarsal phalanges	
(1) distal tarsal phalanges			

Burial No. 11

damaged cranium
 (6) cervical vertebrae
 (10) left ribs
 damaged left clavicle
 left humerus
 damaged right ulna
 (3) right metacarpals
 (1) distal carpal phalanges
 right femur
 left fibula
 (5) left metatarsals
 (8) middle tarsal phalanges

mandible
 (12) thoracic vertebrae
 (7) right ribs
 damaged right clavicle
 right humerus
 (2) right carpals
 (7) proximal carpal phalanges
 left os coxae
 right patella
 right fibula
 (5) right metatarsals
 (2) distal tarsal phalanges

fragmentary #1 cervical vertebra
 (5) lumbar vertebrae sacrum
 (17) rib fragments
 left scapula right scapula
 left radius
 (1) left metacarpals
 (6) middle carpal phalanges
 right os coxae left femur
 left tibia right tibia
 (7) left tarsals (7) right tarsals
 (2) proximal tarsal phalanges
 (18) fragments

Burial No. 12

damaged cranium
 (7) cervical vertebrae
 (10) left ribs
 left clavicle
 left humerus
 left ulna
 (5) left metacarpals
 (6) middle carpal phalanges
 damaged right os coxae
 right patella
 right fibula
 (2) proximal tarsal phalanges

damaged mandible
 (12) thoracic vertebrae
 (10) right ribs
 right clavicle
 right humerus
 right ulna
 (5) right metacarpals
 (4) distal carpal phalanges
 left femur
 left tibia
 (7) left tarsals
 (5) middle tarsal phalanges

fragmentary hyoid
 (5) lumbar vertebrae sacrum
 (9) rib fragments sternum
 left scapula right scapula
 left radius right radius
 (6) left carpals (8) right carpals
 (7) proximal carpal phalanges
 damaged left os coxae
 right femur left patella
 right tibia left fibula
 (7) right tarsals
 (1) distal tarsal phalanges

Burial No. 13

damaged cranium
 fragmentary #2 cervical vertebra
 (5) fragmentary lumbar vertebrae
 (3) rib fragments
 damaged left humerus
 left ulna
 (8) proximal carpal phalanges
 damaged left os coxae
 damaged right femur
 right tibia
 (4) proximal tarsal phalanges

damaged mandible
 (5) fragmentary cervical vertebrae
 fragmentary sacrum
 damaged left clavicle
 right humerus
 damaged right ulna
 (6) middle carpal phalanges
 damaged right os coxae
 left patella
 damaged left fibula
 (1) middle tarsal phalanx

damaged #1 cervical vertebra
 (12) fragmentary thoracic vertebrae
 (2) left ribs (9) right ribs
 damaged right clavicle right scapula
 damaged left radius right radius
 (6) left carpals (4) right carpals
 (2) distal carpal phalanges
 damaged left femur
 right patella damaged left tibia damaged
 right fibula
 (1) distal tarsal phalanx (160) fragments

Table D 1. Paired Cranial Non-metric Characteristics.

DESCRIPTOR	b5-l	b5-r	b6-l	b6-r	b7-l	b7-r	b9-l	b9-r	b10-l	b10-r	b12-l	b12-r
trochlear spur	-	-	-	-	-	-	-	-	-	-	-	-
supraorbital foramen	-	-	n	n	n	n	f	f	f	n	n	f
frontal groove	-	-	-	-	-	-	-	+	+	-	-	-
supratrochlear foramen	-	-	+	-	+	+	-	+	+	-	-	-
infraorbital suture	-	-	-	-	-	-	na	na	na	na	-	-
infraorbital foramen	m	+	s	s	-	-	+	+	s	s	s	s
infraorbital sulcus	na	na	-	-	-	-	-	-	-	-	-	-
accessory optic canal	-	-	na	na	-	-	na	na	-	-	na	na
frontal foramen	n	f	-	-	-	-	-	-	-	-	+	+
anterior ethmoid foramen	st	st	st	st	-	-	na	na	na	na	na	na
posterior ethmoid foramen	+	+	+	+	-	-	na	na	na	na	na	na
maxillary torus	-	-	-	-	-	-	-	-	-	-	-	-
acc lesser palatine for	+	+	+	+	-	-	+	-	na	na	na	na
zygomatic facial foramen	-	m	na	-	-	-	-	na	s	s	na	-
os japonicum	-	-	na	+	-	-	-	na	-	-	na	-
parietal notch bone	-	-	-	-	-	-	-	na	na	na	na	-
parietal foramen	-	+	-	-	-	-	+	-	+	-	+	+
pteron shape	-	-	h	h	-	-	h	na	na	na	na	h
auditory torus	-	-	-	-	-	-	-	na	-	-	-	-
supramastoid crest	l	l	2	2	-	-	l	na	2	2	na	l
mastoid foramen	ex,m	ex,m	na	ex	-	-	st	na	na	na	na	st
auditory exostoses	-	-	-	-	-	-	-	na	-	-	-	-
foramen of hushke	-	-	-	-	-	-	-	na	-	-	-	-
parietal process	-	-	-	-	-	-	-	na	-	-	-	-
marginal foramen tym pla	-	-	-	-	-	-	-	na	-	-	-	-
suprameatal pit	l	l	l	l	-	-	-	na	-	-	2	2
squamoparietal synostoses	-	-	-	-	-	-	-	na	-	-	-	-
condylar facet	s	s	s	s	-	-	s	na	s	s	s	s
anterior palatine alv for	-	-	na	na	-	-	-	-	na	na	+	+
posterior condylar canal	+	+	na	na	-	-	+	na	+	+	-	-
anterior condylar canal	s	s	s	s	-	-	d	na	s	s	-	-
precondylar tubercle	-	-	-	-	-	-	-	na	-	-	-	-
foramen ovale	c	c	c	c	-	-	c	na	c	i	-	-
foramen spinosum	+	+	-	-	-	-	c	na	c	c	-	-
lambdoid ossicles	-	-	-	-	-	-	-	-	na	na	-	-
ossicle at asterion	-	-	-	-	-	-	-	na	na	na	-	-
intermediate condylar can	-	-	-	-	-	-	-	na	-	-	-	-
paracondylar process	-	-	-	-	-	-	-	na	-	-	-	-
foramen of vesalius	-	-	na	na	-	-	-	na	na	na	-	-
accessory mylohyoid for	-	-	na	na	-	-	-	na	-	-	-	-
mylohyoid bridge	-	-	na	na	-	-	-	na	-	-	-	-
mylohyoid bridge (ling)	-	-	na	na	-	-	+	na	-	-	-	-
mandibular torus	l	l	l	l	-	-	l	l	-	-	-	-
gonial angle	sr	sr	na	na	-	-	ev	na	s	s	inv	inv
accessory mental foramen	-	-	-	-	-	-	-	-	-	-	-	-
mental alveolar foramen	+	+	-	-	-	-	+	+	+	+	+	+

Table D 2. Paired Cranial Metrics.

D DESCRIPTOR	b2-l	b2-r	b3-l	b3-r	b5-l	b5-r	b6-l	b6-r	b7-l	b7-r
orbit height	36.5	39.7	-	-	36.3	34.7	31.7	31.8	34.3	-
orbit breadth	37.2	39.8	-	-	38.2	38.9	34.8	37.5	36.6	-
malar length	54.8	-	-	-	53.6	58.7	-	45.9	51.3	-
malar height	20.2	-	-	-	28.1	26.2	-	27.2	23.6	-
mastoid height	21.9	22.9	24.5	25.3	23.0	23.8	22.9	22.1	-	-
mastoid breadth	28.0	22.2	26.9	25.3	21.9	22.2	20.4	24.2	-	-
tympanic plate thick	4.8	4.5	-	-	3.4	2.7	4.4	4.3	-	-
ramus height	47.9	-	-	-	55.2	52.9	-	-	-	-
min ramus breadth	34.1	32.9	-	-	35.1	34.4	-	-	-	-
coronoid height	61.7	60.6	-	-	65.1	61.4	-	-	-	-
condyle height	62.1	-	-	-	57.9	55.7	-	-	-	-
corpus height	28.1	-	-	-	29.3	-	31.8	30.7	-	-

DESCRIPTOR	b8-l	b8-r	b9-l	b9-r	b10-l	b10-r	b12-l	b12-r	b13-l	b13-r
orbit height	37.8	36.0	35.6	34.2	36.4	38.6	29.2	33.7	-	-
orbit breadth	34.8	38.6	37.6	39.4	42.0	40.9	-	37.1	-	-
malar length	-	-	47.1	-	53.8	54.7	-	49.7	-	-
malar height	21.9	20.6	24.2	-	23.6	25.3	-	20.8	-	-
mastoid height	27.0	23.3	26.6	-	25.2	26.9	22.7	26.9	-	26.9
mastoid breadth	20.4	18.2	17.9	-	22.5	27.1	19.8	23.6	24.0	21.2
tympanic plate thick	3.3	3.5	3.7	-	3.2	4.4	2.8	2.2	1.9	1.0
ramus height	46.6	49.6	55.2	-	55.8	58.6	56.4	55.8	-	-
min ramus breadth	31.4	31.1	35.7	-	36.3	33.9	37.9	36.3	-	-
coronoid height	50.7	49.8	58.1	-	61.9	63.1	63.1	62.3	-	-
condyle height	47.6	47.4	55.9	-	57.4	58.3	57.9	59.7	-	-
corpus height	23.6	23.6	30.4	30.7	37.4	33.9	27.6	24.2	-	-

Table D 3. Permanent Dentition- Metrics.

DESCRIPTOR	b6-l	b6-r	b8-l	b8-r	b9-l	b9-r	b12-l	b12-r
mandibular								
I1 length	6.2	5.8	5.31	5.1	4.9	5.0		4.3
I1 breadth	4.7	4.2	6.2	6.6	5.9	6.0	5.2	5.2
I2 length	6.6	6.5	6.4	6.6	6.4	6.5		5.1
I2 breadth	6.1	5.9	6.7	6.7	6.3	6.2	5.9	5.8
C length	8.2	8.5	7.0	6.9	7.1	7.3		6.6
C breadth	6.4	6.7	7.7	7.7	7.8	7.4		6.6
P3 length	6.9	6.5	7.1	6.6	6.7	6.6		6.2
P3 breadth	8.1	8.3	8.4	8.6	7.8	7.5		6.9
P4 length	6.8	6.3	6.9	6.9	6.8	6.9		7.0
P4 breadth	8.4	8.0	8.9	8.8	8.4			7.2
M1 length	10.9	10.5	10.9	10.9	10.2	10.1	11.0	11.5
M1 breadth	11.3	11.4	10.9	11.4	10.5		10.6	10.4
M2 length	11.4	10.8	10.7	10.5	11.8		10.4	10.2
M2 breadth	11.1	10.8	10.5	11.0	10.8	10.6	9.7	9.8
M3 length	10.4	10.0	10.2		10.9		10.9	11.2
M3 breadth	11.1	11.2	10.0		10.3	9.9	10.1	10.1
maxillary								
I1 length	8.1	8.1	8.4	8.5	9.5	9.4		7.7
I1 breadth	7.9	7.4	7.5	7.5	7.9	9.7	6.2	6.6
I2 length	6.8	7.1	7.6	7.6	8.6		6.4	6.4
I2 breadth	7.6	6.8	6.5	6.9	7.0		5.8	5.9
C length	7.1	7.8	8.1	7.9	7.4		8.2	8.2
C breadth	9.5	8.7	8.2	8.3	8.8		7.9	7.6
P3 length	6.6	5.6	8.7	10.4	6.1		6.4	6.9
P3 breadth	9.8	9.2	10.2	8.0	9.2		8.4	8.8
P4 length	6.8	6.5	7.0	7.3			6.5	6.5
P4 breadth	9.9	9.5	10.2	9.9			8.1	8.2
M1 length	10.2	9.9	10.9	10.3	10.9		9.5	9.8
M1 breadth	12.9	11.4	11.7	11.3	11.4		10.4	10.8
M2 length	9.5	8.7	10.2	9.9			9.2	9.4
M2 breadth	11.1	11.8	11.6	11.5			10.2	10.2
M3 length	8.2	8.2	7.7	7.9			10.8	9.1
M3 breadth	10.8	11.1	9.6	9.9			9.8	9.0

Table D 4. Permanent Dentition - Non-metrics.

DESCRIPTOR	b8-l	b8-r	b12-l	b12-r
mandibular				
I1 lingual marginal ridg	0	0	1	1
I2 lingual marginal ridg	0	0	1	1
C lingual marginal ridg	1	0	1	1
C lingual median ridge	0	0	1	1
P3 protocristid	c	c	na	na
P3 lingual groove	0	-	-	-
P3 lingual cusps	1	2	1	1
P4 protocristid	i	c	c	c
P4 lingual cusps	2	2	1	1
M1 cusp number	5	5	5	5
M1 buccal pit	2	1	-	-
M1 protostylid	-	-	-	-
M2 cusp number	4	5	5	5
M2 buccal pit	2	1	-	-
M2 protostylid	-	-	-	-
M3 cusp number	4	-	5	5
M3 buccal pit	1	-	-	-
M3 protostylid	-	-	-	-
maxillary				
I1 lingual marginal ridge	2	2	1	1
I1 lingual marginal groov	-	-	-	-
I1 cingulum	1	1	1	1
I2 lingual marginal ridge	2	2	1	1
I2 lingual marginal groov	1	+	-	-
I2 cingulum	2	2	1	1
C lingual marginal ridges	1	1	2	2
C lingual median ridge	-	-	1	1
C cingulum	1	1	1	1
P4 distal transverse ridg	-	-	na	na
M1 protoconal complex	-	-	-	-
M1 posprotocrista	c	c	c	c
M1 hypocone	+	+	+	+
M1 buccal pit	-	-	-	-
M2 protoconal complex	-	-	-	-
M2 postprotocrista	i	i	na	na
M2 hypocone	-	-	-	-
M2 buccal pit	-	-	-	-
M3 protoconal complex	n/a	n/a	-	-
M3 postprotocrista	n/a	n/a	c	c
M3 hypocone	n/a	n/a	-	-
M3 buccal pit	n/a	n/a	-	-

Table D 5. Paired Infracranial Metrics 1.

D	DESCRIPTOR	b2-l	b2-r	b5-l	b5-r	b6-l	b6-r	b7-l	b7-r	b9-l	b9-r	b10-l	b10-r	b11-l	b11-r	b12-l	b12-r	b13-l	b13-r
Clavicle																			
	maximum length			153.6	149.7		125.3					126.9	123.9			140.1	138.8		
	midshaft circumference			34.5	32.5	34.9	36.2	32.0		26.2		29.0	29.5	26.0	27.0	27.0	28.8	37.5	39.0
	sternal facet length	17.3		22.3	24.0		21.9					21.9	24.8			21.1	19.4		
Scapula																			
	maximum length			158	158.1							138.2	138.9	149.9	154.0		150.0		
	maximum breadth											92.4	96.7	99.0	99.4	103.1	102.8		108.7
	length of spine											114.9	118.8	117.8		120.3	124.3		
	length of supraspinous ln											44.3	45.3		46.7		48.8		
	length of infraspinous ln											105.5	103.8	125.4	118.7	121.2	116.4		133.6
	axillary border length			127.0	126.9							120.2	120.6	129.4	127.8	123.4	128.1		142.8
	supraspinous fossa br											30.7		26.6	32.7	28.6	33.7		41.3
	acromion breadth			37.5	31.7							48.4	39.4	43.6		35.6	36.4		37.2
	coracoid length			37.3	41.5						35.7	34.5	35.9			37.6	36.9		
	glenoid fossa height	33.5		31.2	32.1		34.6			29.9		30.5	32.8	31.2	31.5	34.3	4.7		
Humerus																			
	maximum length			314.5	319.5		304.0			297.0	303.0	278.0	285.0	288.0	309.0	312	318	325	338
	maximum midshaft diameter	29.9		21.5	22.6	18.7	21.9			19.3	20.0	21.8	22.0	20.0	19.2	19.8	21.6	22.8	24.7
	minimum midshaft diameter	14.3		14.9	14.7	15.3	14.0			14.5	14.3	17.2	15.6	12.6	15.3	13.6	15.9	15.3	17.6
	maximum head diameter			39.6	39.0	37.7	39.8			39.8	39.9	39.3	39.7	37.8	38.8	40.8	41.4		46.9
	a-p head diameter		42.9	37.7	39.8		39.2			37.4	37.9	37.7	38.6	33.1	37.2	40.3	37.8		
	intertubercular sulcus br		10.7	8.5	8.6	8.5	8.9			7.2	7.1	9.6	8.4	4.2	4.6	10.3	8.3		6.9
	least circumference	59.0		35.0	59.0	54.9	58.0			55.5	53.3	55.9	56.0	58.0	57.0	52.8	57.0	51.0	65.5
	trochlear breadth	17.0		21.1	19.0		21.8	14.6	14.1	20.6		21.7	17.9	15.9	20.6	19.8	19.1	18.5	
	a-p diameter of trochlea	16.5		14.5	14.8		15.4	19.7	20.3	15.3		14.1	15.5	12.7	13.9	16.3	16.9	18.6	17.8
	capitulum breadth	14.9		16.3	15.0		14.6	18.5	17.5	16.6		15.8	15.9	12.6	15.2	17.1	14.8		
	capitulum height	16.8		21.0	19.4		19.5	13.6	18.9	18.8	18.8	17.8	17.9	16.6	16.5	18.4	18.7		
	distal articular surf br	38.7		39.4	39.4		37.9	36.4	40.4	39.3		40.3	38.9		37.4	38.9	37.6		
	biepicondylar breadth	53.4		54.3	55.8		56	53.8	55.9	53.8		54.8	53.2			54.3	58.6		64.6
	olecranon fossa br	22.6		25.1	25.9		26.7	22.6	22.9	25.6		25.5	23.0	19.0	21.2	27.7	28.4	27.1	30.1
	olecranon fossa med wall	8.3		7.4	7.0		6.9	6.6	7.3	8.7		8.4	9.6	14.9	16.1	8.1	8.8	8.2	9.1
	olecranon fossa lat wall	13.3		16.9	17.9		12.2	15.9	16.2	15.4		18.1	15.7	13.9	16.2	14.0	13.1		17.5
	medial epicondyle breadth			11.8	12.9		12.1	13.1	12.8	13.5		13.6	12.1			12.2	11.9	14.8	
	a-p shaft diameter	15.8		14.8	13.9	14.3	14.0	13.2	13.8	13.4	13.2	12.4	12.9	14.2	13.1	13.2	13.0	16.2	14.2
Radius																			
	maximum length	246.0		251.5	251.5		241.0	224.0	227.0	235.0	238.0	223.0	218.0			238	240.0		275.2
	physiological length	240.0		247.0	247.0		237.0	218.0	222.0	230.0	233.0	218.0	212.0			233	233.0		269.0
	a-p neck diameter	11.3		12.2	15.1	13.4	12.9	12.8	11.9	14.1	14.4	13.8	13.1		10.4	13.2	13.2	13.2	14.2
	m-l neck diameter	11.9		12.3	14.9	11.2	12.3	11.7	11.4	12.9	13.2	14.2	13.1		10.8	13.3	14.4	13.2	14.8
	a-p head diameter			20.1	21.5				21.1	19.9	19.5	19.7			19.4	21.4			21.5
	m-l head diameter			20.3	21.0		19.7		20.1	19.1		18.4	18.2		19.2	19.2	20.1		25.2
	distal breadth			29.2	29.6		30.3	27.0	27.0	30.0	29.7	28.9	28.3			27.8	29.4	34.2	
Ulna																			
	maximum length	267.0		267.2	269.0		262.0		248.0	254.0		242.0				262	264	289	
	physiological length	263.0		243.0	243.0		240.0		227.0	237.0		215.8				236	223	261	
	least circumference	29.0		35.0	33.0		34.0		38.0	33.0	35.0	33.5	33.5			30.1	32.0	33.5	35.0
	m-l midshaft diameter	12.6		11.9	13.3	11.7	12.6		12.8	12.4		14.1				10.8	10.2	16.6	15.7
	a-p midshaft diameter	11.9		14.9	14.3	12.9	12.3		16.2	12.3		15.1			15.3	14.9	13.8	14.7	15.0
	trochlear m-l diameter	15.9		17.6	18.3		18.3		17.6	15.7		19.0	18.2		14.2	18.0	19.8		
	trochlear a-p diameter	19.4		18.2	18.4		34.7		19.7	16.6		17.4	18.8		16.6	18.0	17.9		
	coronoid height	20.8		19.3	20.9		20.1		33.8	32.0		31.5	33.8		30.3				
	olecranon a-p diameter	24.6		21.6	25.5		24.3		25.6	22.8		23.1	23.4		23.0	21.6	23.3		
	proximal a-p diameter	18.5		21.2	20.8		16.3			15.5	14.1	16.2	17.8		17.0	17.1	20.9		
	proximal m-l diameter	13.5		15.1	15.5		14.1			12.5	13.5	12.2	13.2		11.4	13.5	13.5		
	distal breadth	18.1	18.9	18.1	16.0		18.8			18.4	19.9	17.9	17.8			21.4	18.9		18.6

Table D 6. Paired Infracranial Metrics 2.

DESCRIPTOR	b2-l	b2-r	b3-l	b3-r	b5-l	b5-r	b6-l	b6-r	b7-l	b7-r	b9-l	b9-r	b9-l	b9-r	b10-l	b10-r	b11-l	b11-r	b12-l	b12-r	b13-l	b13-r	b108-l
Os Coxa																							
maximum height					213.0	213.0									193.0		198.0	196.0					
maximum breadth					164.0	164.0									151.4	142.1	154.1	154.1		153.4			57.1
acetabulum height					21.3	52.2	43.7								47.1	49.6	51.3	53.3					51.2
acetabulum transverse br					17.9	49.1	46.3	47.4							45.7	47.7	46.3	45.9					
iliac height					100.8	143.4									128.4	126.3	129.1	131.7		136.9			
iliac blade minimum br					57.9	55.6	57.6	57.5							54.7	54.9	52.0	56.2	52.8				65.4
Femur																							
maximum length	451.0	447.0	436.0		456.0	455.0	428.0	436.0		423.0	428.0	431.0			388.0		423.0	425.0	435	435	466	470	
oblique length	447.0	440.0	434.0		452.0	452.0	425.0	428.0		419.0	424.0	427.0			383.0		421.0	417.0	430	429	463	468	
a-p midshaft diameter	26.4	25.6	26.3		28.1	28.1	24.0	25.0	29.4	28.2	26.4	26.2			26.2	26.9	26.7	25.6	22.7	22.9	30.4	32.3	
m-l midshaft diameter	29.2	28.9	22.3		25.5	25.8	23.5	23.7	24.1	25.0	26.2	25.5			25.4	24.6	25.1	24.2	22.6	25.4	28.9	27.7	
head diameter	45.4		36.6		43.9	43.0	42.6	42.9		40.8	42.1				39.6		42.0	41.3	39.5	41.0		48.9	
midshaft circumference	89.0	84.9	93.8		83.0	82.0	77.0	78.0	83.0	85.0	86.5	81.0			82.0	81.5	79.0	79.0	72.0	78.0	94.0	97.0	
subtrochanteric a-p diam	23.9	29.1	25.4		28.6	30.3	23.2	26.2		28.7	25.9	27.5			24.8	26.5	23.1	24.4	23.4	23.9		30.9	
subtrochanteric m-l diam	33.7		29.6		30.2	33.2	32.0	32.8		34.6	33.0	35.1			33.6	34.5	32.6	30.2	35.5	36.1		39.2	
vertical neck diameter	32.8		31.6		32.2	32.2	30.1	31.4		28.4	30.6	28.8			29.0	32.3	29.2	28.5	31.6	31.1			
a-p neck diameter	25.7		23.2		26.3	25.3	25.0	26.8		23.9	23.6	25.9			25.7	25.4	22.9	22.8	23.7	23.8			
proximal width			86.3		90.3	86.7	80.3			82.3	86.3				82.2		85.9	83.9		85.5			
neck length	47.6		51.2		39.9	41.4	40.9			39.0	44.5	42.9			42.8	38.9	43.3	47.0		48.4			
bicondylar breadth		65.8			66.1	63.1			61.9	63.1	63.7	69.1			66.3		65.1	62.6	65.0	63.2	71.4		
a-p diameter distal shaft	28.0	31.3			40.9	36.8	39.1	37.2		37.8	37.3	38.8			35.3		37.1	36.9	34.8	34.9	40.4	40.4	
a-p diameter lateral cond	64.3	54.7	57.2		61.1	61.7	57.3		58.8	58.8	58.4	56.5			55.2		56.7	56.1	62.6	62.2	67.1	65.8	
a-p diameter medial cond		53.7			61.3	60.3				57.7	58.7	58.9			55.1		57.4	58.4	58.4	58.8	62.8		
m-l diameter lateral cond	23.7	23.1	29.4		23.8	24.7	20.7		24.6	24.9	22.8	23.7			23.8		24.6	20.6	21.8	22.3	20.3	23.3	
m-l diameter medial cond		23.1			26.9	23.6			23.6	22.6	20.5	24.3			22.7		21.3	22.3	24.5	25.8	26.9		
condylar notch breadth	18.0	20.5			16.3	18.5	18.3	18.1	18.2	19.3	22.9	21.7			21.4		23.3	23.4	16.9	16.2	25.3	19.5	
Patella																							
maximum length		36.8		35.2	38.5	39.1			36.7	33.3	38.8			37.6	37.9			37.6	40.8	39.1	44.4	46.7	
maximum breadth		40.8			44.2	42.4	37.8		40.0	40.1	39.9			39.1	37.7			37.1	36.2	37.9	49.4	51.2	
Tibia																							
maximum length		374.0			378.0	377.0	354.0		338.0	341	354				322.0	350.0	349.5	367	370			324	
a-p diameter nutrient for	33.3	30.6	33.6		32.8	31.9	30.8	31.5	30.5	30.3	30.2	28.8			28.9	32.0	30.0	29.6	29.2	40.3	40.8	28.6	
m-l diameter nutrient for	22.7	21.6	25.2		21.6	22.0	21.0	20.7	21.8	21.7	20.0	21.4			21.9	20.7	20.2	17.7	18.6	23.6	23.1	22.7	
proximal a-p diameter	51.1	48.2			49.0	47.9			44.0	40.7	47.1	46.9				44.2	45.2	47.4	46.2			43.5	
proximal m-l diameter	64.2				71.3					64.6		65.9					66.6	64.7	67.8	66.2			
distal diameter	42.3	45.6			51.4	44.0			39.2	38.4	40.9						42.6	46.1	42.3	40.5			43.0
Fibula																							
maximum length				363.0	368.0				327.0	329.0	347.0						348.0	343.0	386	358			322
Talus																							
maximum length		52.8	50.6		52.0	53.1		52.6	50.9	49.0	51.0	51.2			50.7	51.8	50.1	51.1	51.9				50.2
transverse trochlear br		31.2	31.7		30.1	29.2	26.8	28.5	28.2	30.1	30.8	29.4					29.1	30.3	29.5	27.3	33.3	31.9	20.0
maximum trochlear height		28.4	29.1		30.3	30.2	31.5	30.8	28.9	26.9	31.2	29.4					28.1	28.2	29.1	28.3	30.5		27.8
maximum breadth		38.2	36.0		37.5	37.4			36.2	35.8	41.9						28.1	40.6	38.7	40.8	40.1		40.7
Calcaneus																							
maximum length					72.6	73.3			61.9	63.8	74.4				67.3	70.6	68.2	66.2	64.7				70.1
minimum breadth					20.4	20.5			22.5	22.4	26.5				22.5	22.9	23.3		24.8				25.5
height					37.4	38.2			36.8	34.8	37.4				38.1	36.1	34.5	34.8	34.9				34.9

Table D 7. Paired Infracranial Metrics 3.

DESCRIPTOR	b2-l	b2-r	b5-l	b5-r	b7-l	b7-r	b9-l	b9-r	b9-l-l	b10-l	b10-r	b11-l	b11-r	b12-l	b12-r	b13-l	b13-r	b108-l
Metacarpals																		
#1																		
length	41.0	42.2	44.9	45.5	40.4	38.4		39.2		40.6			38.9	46.2	46.2	40.9		
r-u midshaft diameter	8.1	10.9	9.3	8.8	9.7	9.8		10.6		10.8			8.8	9.2	9.8	11.6		
s-p midshaft diameter	6.2	8.3	8.2	8.1	7.8	7.2		7.3		8.6			6.2	7.1	7.7	8.9		
#2																		
length		65.9	66.9	65.8	63.2	60.7	58.6						64	69.4	68.1	66.9		60.8
r-u midshaft diameter		7.2	8.8	8.4	7.8	7.4	8.1						6.7	6.9	7.3	7.9		7.3
s-p midshaft diameter		8.6	8.6	8.4	8.0	7.9	8.1						6.5	7.3	7.8	9.2		8.7
#3																		
length		65.1	66.8	65.5	62.9	60.7	56.9			59.0				68.9	68.7	67.6	68.0	
r-u midshaft diameter		7.5	7.9	7.5	7.7	7.7	7.3		7.1	7.4			6.9	6.9	6.6	8.6	8.9	
s-p midshaft diameter		9.7	9.3	8.6	8.6	8.6	9.1		7.5	8.5			7.5	7.6	7.7	9.8	9.8	
#4																		
length		56.7	55.9	58.1	54.2	54.3		48.4		48.7				58.2	60.4		57.7	
r-u midshaft diameter		6.2	6.1	6.1	5.6	5.9		6.2		6.6				5.7	5.8		6.8	
s-p midshaft diameter		7.6	7.5	6.9	6.3	7.2		7.3		6.9				6.2	6.4		6.8	
#5																		
length			51.7	49.2	49.2	47.7		45.6		43.7		53.2		55.7	55.2		54.0	
r-u midshaft diameter			7.7	6.8	6.6	8.1		7.8		7.2		5.5		6.2	7.3		7.2	
s-p midshaft diameter			6.7	6.5	6.1	6.0		7.7		6.7		5.7		5.7	5.9		7.3	
Metatarsals																		
#1																		
length			61.1	61.6	53.3	53.4	55.9	56.6			52.9	56.5	54.9	61.3	62.8			55.4
t-f midshaft diameter			12.5	12.5	12.2	12.4	11.4	11.7			13.3	10.6	10.8	12.9	13.4			13.0
s-p midshaft diameter			14.1	13.8	11.9	12.5	13.6	13.2			12.6	11.6	11.5	12.7	13.4			12.2
#2																		
length			72	73.4	62.8	63.8	70.9	68.6		68.3	68.7	70.9	78.6	80.8				69.6
t-f midshaft diameter			8.3	8.1	6.9	6.8	6.4	6.5		7.6	6.9	7.3	7.7	8.2				7.4
s-p midshaft diameter			9.3	8.6	8.6	8.3	7.6	7.9		8.2	9.3	9.4	9.0	7.8				10.0
#3																		
length			69.9	69.7	64.9	66	66.2	64.9		61.8	66.7	67.4	73.1	72.7				62.8
t-f midshaft diameter			6.6	6.9	8.2	8.3	5.9	6.5		5.8	6.5	6.3	7.5	6.1				7.4
s-p midshaft diameter			10.5	9.4	9.2	8.4	8.8	8.9		8.6	9.5	9.2	9.2	8.6				9.3
#4																		
length			68.4		63.9	62.8	65.1	64.7		62.9	66	64.8	73.6	74.6				61.6
t-f midshaft diameter			7.5		6.2	6.4	5.4	5.6		6.3	5.8	6.1	7.6	7.1				6.1
s-p midshaft diameter			10.4		9.8	9.2	7.8	8.1		9.5	8.6	9.2	9.2	9.3				9.5
#5																		
length				63.8	61.7	61.7				63.8	68.8			66.1	70.3			65.3
t-f midshaft diameter				9.3	10.2	9.9				9.2	9.7		10	9.5	10.8			10.2
s-p midshaft diameter				8.2	7.0	7.4				7.6	6.9		7.2	7.6	7.5			8.0

Table D 8. Paired Infracranial Non-metrics.

DESCRIPTOR	b5-l	b5-r	b6-l	b6-r	b7-l	b7-r	b9-l	b9-r	b9-l-l	b9-l-r	b10-l	b10-r
Clavicle					na							
rhomboid fossa	-	-		1			-				1	2
subclavian facet	-	-		-			+				1	1
supraclavicular foramen	+	+		-			-				-	-
Scapula												
circumflex sulcus	-	-									-	-
suprascapular foramen	-	-									-	-
acromial articular facet	-	-									-	-
unfused acromion	-	-									-	-
glenoid fossa extension	-	-									-	-
Humerus												
supracondyloid process	-	-		-	-	-	-	-	-	-	-	-
septal aperture	+	-	na	-	-	-	-	-	-	-	-	-
Ulna												
trochlear notch form	s	s	s	s		d	s				s	s
Os Coxa												
acetabular crease	-	-		-			-	-			-	-
accessory sacral facet	+	-		-			-	-			+	+
Femur												
poirier's facet	-	-					-	+			+	+
allen's fossa	-	-					-	-			-	-

hypertrochanteric fossa	-	1	-	-	-	1	1	-	-	-	-
exostoses in troch fossa	-	-	-	-	-	-	-	-	-	-	-
third trochanter	-	-	-	-	-	-	-	1	1	-	-
plaque	-	-	-	-	-	-	-	-	-	-	-
Patella											
vastus notch	-	-	-	1	1	-	-	-	-	-	-
Tibia											
medial squatting facet	-	-	-	-	-	+	-	-	-	-	-
lateral squatting facet	+	-	-	-	-	-	-	-	-	-	-
Talus											
os trigonum	-	-	-	-	-	-	-	-	-	-	-
medial talar facet	d	d	-	s	s	-	-	-	-	-	-
laterla talar extension	-	-	-	-	-	+	-	-	-	-	+
inf talar articular surf	-	-	-	s	s	s	s	-	-	-	s
Calcaneus											
peroneal tubercle	na	-	-	-	-	+	-	-	-	-	-
anterior calcaneal facet	-	s	s	s	s	s	s	-	-	-	s
pos-sup facet extension	-	-	-	-	-	-	-	-	-	-	-

Table D 9. Unpaired Cranial Metrics.

DESCRIPTOR	b2	b3	b5	b6	b7	b8	b9	b10	b12	b13
frontal chord	114.1		104.8	105.8	106.9	101.5	102.4		102.8	108.1
frontal arc	125.0		119.0	121.0	120.0	114.0	107.0		120.0	130.0
maximum frontal breadth			110.0	110.0		110.4	105.0	104.9		
minimum frontal breadth	99.3		89.9	93.2	89.5	94.6	89.4	95.4	81.5	91.1
simotic chord	108.0		11.3	10.4	13.5	10.7	12.2		5.9	
biorbital breadth	101.9		99.6	99.1		92.7	93.4		94.5	
interorbital breadth	28.6		24.8	29.3	26.7	25.2	25.0		22.6	13.9
facial height			113.4	114.8		106.8	120.9			
nasal breadth	26.5		27.2	25.7	25.4	22.9	25.6	26.0	18.9	
nasal height	51.2		54.5	51.2	50.7	51.4	51.1	50.9	43.7	
upper facial height	72.9		72.4	68.4	60.3	68.3	73.6	72.1	58.7	
external palate breadth	64.0			62.9			59.4		53.0	
external palate length	53.4		52.9	59.2			50.1			
internal palate breadth	41.8		40.1	39.1			35.9		31.0	
internal palate length	47.5		48.1	51.5			44.1			
parietal chord		108.6	92.3	109.6		98.2	103.8		96.9	
parietal arc		124.0	100.0	124.0		109.0	116.0		118.0	
bizygomatic breadth	134.5		134.9	133.0		119.0		125.0		
biauricular breadth			124.0	121.0				114.0		
biasterionic breadth			99.0	97.0				111.0		
occipital chord			90.9			89.9			85.2	
occipital arc			113.0			112.0			114.0	
foramen magnum length			34.8			38.4		29.0		
foramen magnum breadth			30.4			27.1		25.2		
bicondylar breadth			123.9			114.6		113.4		
bigonial breadth			90.8			90.0		83.5		
mandibular symphysis ht			26.2	30.7		27.2	30.1	35.5	21.3	
foramen mentale breadth			44.8	43.9		44.8	43.4	42.5		44.9
mandibular coprus length			102.0			91.0		101.0		
cranial length			171.0	174.0		168.5	170.8	177.0	172.0	
cranial breadth		135.1	126.0	127.5		124.5	128.0	130.0		
basion-bregma height			121.1	129.0		116.0		123.0		
basion-porion height			22.0	20.0		22.5		20.6		
basion-nasion length			99.1	97.5		81.5		98.5		
basion-prosthion length			99.5	95.5		80.7		95.0		
auricular height			100.9	106.0		94.5	100.7	105.4		
cranial index			73.7	73.3		73.9	74.9	73.4		
cranial module			139.4	143.5		136.3		143.3		
length-height index			70.8	74.1		68.8		69.5		
breadth-height index			96.1	101.2		93.2		94.6		
mean-height index			81.5	85.5		79.2		80.1		
fronto-parietal index			71.3	73.1		75.9		73.3		
auricular mean-ht index			67.9	70.3		64.5		68.7		

Table D 10. Unpaired Infracranial Metrics.

DESCRIPTOR	b5	b6	b7	b9	b10	b11	b12	b13
vertebrae								
atlas external breadth	72.8	72.1			65.5		74.8	
atlas external length	40.7	45.2	40.1		37.9		36.5	41.1
atlas internal breadth	28.1	23.3	23.3		25.7		29.2	29.8
atlas internal length	29.5	30.6	28.3		27.4		27.1	
axis external breadth	54.2	45.2			50.9		50.2	
axis external length	43.6	39.8	41.3	39.4	44.3	41.6	43.6	
C7 body breadth	26.3	29.6			29.5		26.6	
C7 body length	16.6	16.5			14.5		16.6	
T12 body breadth	33.4	33.7	33.3	32.2	30.7	32.4		
T12 body length	25.1	29.0	28.8	29.7	25.3	31.0		
L5 body breadth	45.2	46.6		44.6	43.9	43.4	49.3	
L5 body length	36.4	33.3		32.8	28.1	33.2		
Sternum								
manubrium length	40.7				41.8		41.9	
maximum body length					90.9		94.7	
maximum body breadth	40.2				27.4		35.8	
Sacrum								
maximum height	108.7			98.3	95.3	99.0	126.8	
maximum breadth	120.5			110.7	110.3	116.4	116.5	

Table D 11. Unpaired Cranial Non-metrics.

DESCRIPTOR	b5	b6	b7	b9	b10	b12	b13
metopism	-	+	-	-	na	-	-
bregmatic bone	-	-	-	-	na	+	
nasal bone shape	g	g		g	g	g	
transverse palatine sut	an	sr		sr	an	sr	
palatine torus	2	-		-	-	-	
coronal ossicles	-	-		-	na	-	+
highest nuchal line	+	-		-	+	-	
ossicle at lambda	-	-		-	na	-	
odonto-occipital artic	-	-		na	-	-	
pharyngeal fossa	-	-		na	-	-	
superior sagittal sulcus	r	na		na	l		

Table D 12. Unpaired Infracranial Non-metric Characteristics.

DESCRIPTOR	b5	b6	b7	b9	b10	b12
Vertebrae						
atlas facet form	s	d	s		s	s
posterior bridge	-	-	-		-	-
lateral bridge	-	-	-		-	-
transverse foramen bip	0/7	0/7	0/4	1/2	3/14	3/14
transverse foramen open	0/7	0/7	0/4	0/2	3/14	-
Sternum						
sternal aperture	-		+		-	-
Sacrum						
accessory sacral facet	+	-		-	-	-

Table D 13. Paired Juvenile Infracranial Metrics.

DESCRIPTOR		
Clavicle		
length	125.9	128.08
Scapula		
length	134.8	136.2
breadth	93.6	91.9
Humerus		
length		
proximal metaphysis br	37.3	38.2
distal metaphysis br	50.8	50.5
Radius		
length		
Ulna		
length		
Ilium		
length		
breadth	131.6	133.2
Femur		
length	373.0	369.0
proximal metaphysis br	73.1	71.2
distal metaphysis breadth	60.7	57.9
Tibia		
length	301.0	303.0
Fibula		
length	296.0	297.0
Basilar		
length		
breadth		