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ANCIENT MONUMENTS LABORATORY

REPORT

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JM

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SUMMARY OF ADDITIONS TO AND ALTERATIONS OF

ROGER JONES' COMPUTER CODINGS

FOR ANIMAL BONES

Explanation of Measurement Input

The accompanying lists show the order of input of measurements for mammals and birds. Each bone element has a set number of measurements to be taken where possible (maximum 20). The correct number of columns and rows must be entered to prevent program error and the clock on the RDU must be preset accordingly.

The input order begins with the measurements used by Roger Jones (RJ) (These are already in the program). These are followed by various measurements used by von den Driesch (1976) (vdD). All these measurements are illustrated by the respective authors. In addition, there are a few measurements used by PC, JC or MM but not by either RJ or vdD. These are marked "*" and are defined below:

- 1) Mandible M3L = vdD's length of M_3 , measured along the alveoli.
CRL = vdD's length of the cheektooth row.
- 2) Red Deer Skull 43 = min. distance between the pedicels in male.
(N.B. RJ's Antler A = breadth of coronet. B = max. length from the coronet. Antler Tine A = greatest length. B = greatest breadth.)
- 3) Humerus LT = LM's max. length of trochlea.
- 4) Radius R/UGL1 = vdD's greatest length of the lateral part of the radius and ulna following Kiesewalter's measurement of horses.
- 5) Calcaneus AD4 = the distance between the distal-most point of the axial lateral ridge of the plantar surface and the most proximal point of the distal-most facet. LDP = the distance between the most proximal and most distal points of the distal-most facet.
- 6) Metapodials DPB = max. breadth at the distal fusion point.
DPD = max. depth at the distal fusion point.
- 7) Carpometacarpus BS = max. breadth of both shafts following Erbersdobler (1968).

The following bones have a spare, undefined measurement:

Tibia (1); Phalanges A/B (1); Artiodactyla Talus (2); Pubis (1); Acetabulum (2); Bird Skull (5); Bird Radius (1); Bird Os Coxa (1).

1.

Order of Input for Measurements (Mammal Bones)

<u>Mandible</u> (4*5)=20	(RJ) (vdD)	CB	H1	H2	H3	L1	L2	L3	L4	TL	PML	ML	DI
		-	-	-	-	-	-	-	-	-	✓	✓	-
	(RJ) (vdD)	1	2	3	4	5	6						
		✓	-	-	✓	-	-	(+) M3L*CRL*					
<u>Skull Horse</u> (4*5)=20	(RJ/vdD)	22	23	24	48	36	37	34	38	50	31	32	1
		2	39	44	42	40	45	47	19				
<u>Cow Skull</u> (4*5)=20	(RJ/vdD)	45	46	47	20	21	22	26	28	29	23	40	41
		39	31	33	35	1	2	38	43				
<u>Sheep/Goat Skull</u> (4*5)=20	(J/D)	41	42	21	22	23	39	9	27	29	30	28	26
		31	33	34	36	1	2	24	25				
<u>Pig Skull</u> (4*5)=20	(RJ/vdD)	30	31	27	28	29	34	36	37	39	38	45	40
		13	43	41	23	24	44	1	2				
<u>Dog Skull</u> (4*5)=20	(RJ/vdD)	1	7	8	9	16	17	23	25	28	29	30	32
		34	36	37	38	40	L	B	GB				
<u>Red Deer Skull</u> (4*5)=20	(J/vD)	20	21	22	37	26	28	25	34	38	40	41	23
		24	31	32	33	35	1	2	43*				
<u>Antler</u> =5	(RJ)	A*	B* (}	(vdD)	41	-	-						
<u>Antler Tine</u> =2	(RJ)	A*	B*										
<u>Scapula</u> =8	(RJ) (vdD)	PB	IB	ND	GB	GD	GC	(+)	L				
		LB	SLC	-	GLP	BG	LC	(+)	HS	DFA			

Order of Input for Measurements (Mammal Bones)

<u>Humerus</u> (2*5)=10	(RJ) (vdD) (MM)	L1 GL1 (+)	L2 GLC	PB Bp	PD -	DB BT	DD -		Bd	SD	GL	(+)	LT*	
<u>Radius</u> (2*6)=12	(RJ) (vdD)	L GL	PB Bp	PD -	MB -	MD -	DB Bd	DD -	PJB BFp	(+)	BFd	L1	SD R/UGL1*	
<u>Ulna</u> =4	(RJ) (vdD)	ØL LO	NB BPC	L GL		(+)	SDO							
<u>Pelvis</u> (4*5)=20	(RJ) (vdD)	A GL	B LS	C -	GBA	E -	F -	G -	H -	I SB	J -	K -	L -	M -
	(RJ) (vdD)	N -	Ø -	P SH	Q Lfo	R -	LA	LAR						
<u>Femur</u> (2*5)=10	(RJ) (vdD)	L1 GL	L2 GLC	DB Bd	LCW -	MCW -	DD -	MB SD	MD -	HØ DC	HT Bp			
<u>Patella</u> =2	(RJ) (vdD)	L GL	B GB											
<u>Tibia</u> (2*5)=10	(RJ) (vdD)	L1 GL	L2 -	PB Bp	PD -	MB SD	MD -	DB Bd	DD Dd	(+)	L1	(+)	*	
<u>Fibula</u> =1	(RJ) (vdD)	L GL												
<u>Horse Talus</u> (2*4)=8	(RJ) (vdD)	A LMT	B -	C -	D -	E -	(+)	GB	GH	BFd				
<u>Artiod. Talus</u> (2*4)=8	(RJ) (vdD)	A GL1	B -	C GLM	D -	E Bd	(+)	DL	*	*				
<u>Calcaneus</u> (2*6)=12	(RJ) (vdD) (MM)	L1 -	L2 -	L3 GL	PB -	PD -	AB1 GB	AB2 -	AD1 -	AD2 -	AD3 -	(+)	AD4*100P*	

Order of Input for Measurements (Mammal Bones)

Metapodials (RJ) L PB PD MB MD DB MDD1 MDD2 LDD1 LDD2
 (2*8)=16 (vdD) GL Bp Dp SD - Bd - - -

(RJ) WMC WLC
 (vdD) - - (+) DD LL
 (+) DFB*DFD*

Phalanx A/B (RJ) L PB PD MB MD DB MDD LDD
 (2*6)=12 (vdD) - Bp - SD - Bd - - (+) BFp BFd GLpe *

Phalanx C (RJ) L1 L2 PB PD
 =5 (vdD) GL Ld GB - (Horse)
 (vdD) DLS Ld - - (Ruminants and pig) (+) MBS

Third MC/MT (Pig)
 =4 (vdD) (+) GL Bp Bd B

Fourth MC/MT (Pig) = same as Third MC/MT
 =4

Atlas
 =6 (vdD) (+) GB GL BFcr BFcd GLF H

Order of Input for Measurements (Mammal Bones)

<u>Horse Maxilla</u>	(vdD)	22	23	24	-	-	
= 5							
<u>Horse Occipital</u>	(vdD)	36	37	34	-	-	-
= 6							
<u>Horse Frontal</u>	(vdD)	31	32	39	42	40	
=5							
<u>Horse Parietal</u>	(vdD)	-	-				
=2							
<u>Horse Incisive</u>	(vdD)	45	-				
=2							
<u>Cow Horn Core</u>	(vdD)	45	46	47	-		
=4							
<u>Cow Maxilla</u>	(vdD)	20	21	22	-	-	
=5							
<u>Cow Occipital</u>	(vdD)	26	28	29	41	-	-
=6							
<u>Cow Frontal</u>	(vdD)	23	33	-	-	-	
=5							
<u>Cow Parietal</u>	(vdD)	31	-				
=2							
<u>Cow Temporal</u>	(vdD)	39	-				
=2							
<u>Sheep Horn Core</u>	(vdD)	41	42	-	-		
=4							
<u>Sheep Maxilla</u>	(vdD)	21	22	23	-	-	
=5							
<u>Sheep Occipital</u>	(vdD)	27	29	30	28	26	-
=6							
<u>Sheep Frontal</u>	(vdD)	34	24	25	-	-	
=5							
<u>Sheep Parietal</u>	(vdD)	31	-				
=2							
<u>Sheep Temporal</u>	(vdD)	-	-				
=2							

Order of Input for Measurements (Mammal Bones)

Pig Maxilla (vdd) 30 31 27 28 29

=5

Pig Occipital (vdd) 34 36 37 39 38 45

=6

Pig Frontal (vdd) 41 24 - - -

=5

Pig Parietal (vdd) 40 13

=2

Pig Incisive (vdd) 23 -

=2

Deer Antler Pedicel (D) 40

=1

Deer Antler (RJ) A* B* (vdd) 41 - -

=5

Deer Maxilla (vdd) 20 21 22 - -

=5

Deer Occipital (vdd) 26 28 25 38 - -

=6

Deer Frontal (vdd) 23 24 31 32 33

=5

Deer Parietal (*) 43 -

=2

Deer Nasal (vdd) 35

=1

Dog Maxilla (vdd) 16 17 L B GB

=5

Dog Occipital (vdd) 23 25 28 40 - -

=6

Dog Frontal (vdd) 32 37 - - -

=5

Dog Parietal (vdd) 29 -

=2

Dog Incisive (vdd) 36 -

=2

Order of Input for Measurements (Mammal Bones)

Ischium (RJ) E G H J N O
=6

Ilium (RJ) I P
=2 (vdD) SB SH

Pubis (RJ) K -
=2

Acetabulum (RJ) L M
=6 (vdD) - - LA LAR - -

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<u>Sternum</u> =5	(RJ)	A	E						
	(VdD)	LC	-	(+)	LM	dL	SBF		
<u>Coracoid</u> =4	(RJ)	A							
	(VdD)	GL	(+)	LM	Bb	BF			
<u>Scapula</u> =2	(RJ)	A							
	(VdD)	GL	(+)	DiC					
<u>Furcula</u> =2	(RJ)	A	F						
	(VdD)	-	-						
<u>Humerus</u> =4	(RJ)	A	B	C	D				
	(VdD)	GL	Bp	Bd	SC				
<u>Radius</u> =4	(RJ)	A							
	(VdD)	GL	(+)	Bd	SC	*			
<u>Ulna</u> =5	(RJ)	A	D						
	(VdD)	GL	-	(+)	Bp	SC	Did		
<u>Carpomet.</u> =5	(RJ)	A							
	(VdD)	GL	(+)	L	Bp	Did			
	(JC)				(+)	BS			
<u>Pelvis</u> =4	(RJ)	A							
	(VdD)	-	(+)	LV	DiA	*			
<u>Femur</u> =8	(RJ)	A	B	C	D				
	(VdD)	GL	Bp	Bd	-	(+)	LM	Dp	SC
									Dd
<u>Tibiotarsus</u> =8	(RJ)	A	B	C	D				
	(VdD)	GL	Dip	Bd	-	(+)	La	Sc	Dd
									BP
<u>Tarsomet.</u> =5	(RJ)	A	B	C	Al				
	(VdD)	GL	Bp	Bd	(+)	SC			
	(JC)				D				

Additions and Alterations to EATSPEN File

Common Species

Unknown Bird - UNB
Unknown Fish - UNF
Unknown Mammal - UNM
Unknown Species - UNX
Small Artiodactyl- SAR
Large Artiodactyl- LAR
Large Mammal - OXO

Horse - HOR
Donkey - DON
Cattle - COW
Sheep - SHE
Goat - GOA
Sheep or Goat - S/G
Pig - PIG
Dog - DOG
Cat - CAT

Cervus elanhus - RED
Dama dama - FAL
Capreolus capreolus - ROE
Oryctolagus cuniculus - RAB
Lepus sp. - HAR

Domestic Fowl - FOW
Domestic Goose - GOO

Additions and Alterations to the ANATLIS File

Additions

Lower Premolar - LPM	Metapodial Distal Epiphysis -DEM
Lower Molar - LM	Third Metapodial Distal Epiphysis -DEM
Upper Premolar - UPM	Fourth Metapodial Distal Epiphysis -DEM
Upper Molar - UM	Lateral Metapodial -LMP
Dec.Lwr.Premolar - DLP	Lateral Metapodial Distal Epiphysis -DEM
Dec.Lwr.Incisor - DLI	Metapodial -MP
Dec.Upr.Premolar - DLP	Lateral Metatarsal -LMT
Dec.Upr.Incisor - DUI	Medial Metatarsal -MMP
Lower Incisor - LI	Medial Metapodial -LMP
Upper Incisor - UI	Fused 2/3 Carpal -CAR

Alterations

Changes have been made in the number of measurements taken on the following elements:-

Atlas	6	1	VCOL	Pubis	2	1	PUB
Calcaneus	6	2	CAL	Radius	6	2	RAD
				Scapula	8	1	SCAP
First Phalanx	6	2	APH	Second Phalanx	6	2	BPH
Fourth MC	4	1	MCD	Talus	8	1	AST
Fourth MT	4	1	MTD	Third MC	4	1	MCC
Frontal	5	1	FRNT	Third MT	4	1	MTC
3/4 MC	8	2	MC	Third Phalanx	5	1	CPH
3/4 MT	8	2	MT	Tibia	5	2	TIB
Horn Core	4	1	HC	Ulna	4	1	ULN
Humerus	5	2	HUM				
Ilium	2	1	ILM	Bird Carpomet.	5	1	BTM
Mandible	5	4	MAN	Bird Coracoid	4	1	BCD
Maxilla	5	1	MAX	Bird Femur	8	1	BFM
Occipital	6	1	OCIP	Bird OS Coxa	4	1	BOC
Bird Radius	4	1	BRD	Bird Scapula	2	1	BSP
Bird Sternum	5	1	BST	Bird Tarsomet.	5	1	BMT
Bird Tibiotars.	8	1	BTB	Bird Ulna	5	1	BUN

Alterations to ANATLIS File (cont.)

The 0(zero) in all codings of the lower and upper incisors, premolars and molars has been omitted. The codings now read:

Deciduous lower incisors 1-4	- DLI1,DLI2,DLI3,DLI4
Deciduous lower premolars 1-4	- DLP1,DLP2,DLP3,DLP4.
Deciduous upper incisors 1-4	- DUI1,DUI2,DUI3,DUI4.
Deciduous upper premolars 1-4	- DUP1,DUP2,DUP3,DUP4.
Lower incisors 1-4	- LI1,LI2,LI3,LI4.
Lower molars 1-3	- LM1,LM2,LM3,LM4.
Lower premolars 1-4	- LPM1,LPM2,LPM3,LPM4.
Upper incisors 1-4	- UI1,UI2,UI3,UI4.
Upper molars 1-3	- UM1,UM2,UM3.
Upper premolars 1-4	- UPM1,UPM2,UPM3,UPM4.

ANATLIS Codings - Skull and Teeth

<u>Skull</u>				<u>Teeth</u>			
Antler	ANT	5	1	Dec.lower canine	DEC	1	1
Antler pedicel	ANP	1	1	Dec.lower premolar ⁺	DLP	1	1
Antler tine	ATT	2	1	Dec. lower pmls 1-4*	DLP1-4	1	1
Cranium	CRAN	6	1	Dec.upper premolar ⁺	DUP	1	1
Facial area	FACE	5	1	Dec.upr. pmlrs.1-4*	DUP1-4	1	1
Frontal	FRNT	5	1*	Lower Canine	LC	1	1
Horn Core	HC	4	1*	Lower Tooth	DN	1	1
Hyoid	HYD	1	1	Lower Molar+	LM	1	1
Incisive	INC	2	1	Lower Molars1-3*	LM1-3	1	1
Lacrimal	LAC	1	1	Lower Premolar ⁺	LPM	1	1
Mandible	JAW	5	4*	Lower Premolars1-4*	LPML-4	1	1
Maxilla	MAX	5	1*	Lower Incisor ⁺	LI	1	1
Nasal	NAS	1	1	Lower Incisors1-3*	LIL-3	1	1
Occipital	OCIP	6	1*	Dec.Lwr.Incisor ⁺	DLI	1	1
Palatine	PAL	2	1	Dec.Upr.Incisor ⁺	DUI	1	1
Parietal	PAR	2	1	Upper Incisor ⁺	UI	1	1
Petrous	PET	1	1	Upper Incisors1-3*	UIL-3	1	1
Presphenoid	PSPH	2	1	Upper Canine	UC	1	1
Skull	SKL	5	4	Upper Premolar ⁺	UPM	1	1
Skull fragment	SFRAG	1	1	Upper pmlrs.1-4	UPML-4	1	1
Sphenoid	SPH	2	1	Upper Molar ⁺	UM	1	1
Temporal	TEMP	2	1	Upper Molars 1-3*	UML-3	1	1
Zygomatic	ZYG	1	1	Upper Tooth	UT	1	1

* = Alteration from the original ANATLIS coding

+ = Addition to the original ANATLIS coding

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ANATLIS Codings - Major Limb Bones

<u>Fore</u>				<u>hind</u>			
Humerus	HUM	5	2*	Os Coxae	OC	5	4
Scapula	SCAP	8	1*	Acetabulum	ACET	6	1
Radius	RAD	6	2*	Ilium	ILM	2	1*
Ulna	ULN	4	1*	Ischium	ISH	6	1
3/4 Metacarpal	MC	8	2*	Pubis	PUB	2	1*
3rd Metacarpal	MCC	4	1*	Femur	FEM	5	2
4th Metacarpal	MCD	4	1*	Patella	PAT	2	1
Lateral M/C	MCG	1	1	Tibia	TIB	5	2*
Medial M/C	MCH	1	1	Fibula	FIB	1	1
				3/4 Metatarsal	MT	8	2*
				3rd Metatarsal	MTC	4	1*
				4th Metatarsal	MTD	4	1*
				Lateral M/T	MTG	1	1+
				Medial M/T	MTH	1	1+
Humerus distal ep. DEH				1	1	Femur distal ep. DEF	1 1
Humerus gtr. tub. GTH				1	1	Femur gt. troch. GTF	1 1
Humerus med. ep. LEH				1	1	Femur prox. ep. PEF	1 1
Humerus prox. ep. PEH				1	1	Tibia distal ep. DET	1 1
Radius dist. ep. DER				1	1	Tibia tuberosity TT	1 1
Radius prox. ep. PER				1	1	Tibia prox. ep. PET	1 1
Ulna prox ep. PEU				1	1	Fibula prox ep. PEFB	1 1
Ulna distal ep. DEU				1	1	Fibula distal ep. DEFEB	1 1
Metacarpal dist. e. DEMC				1	1	Metatarsal dis. ep. DEMT	1 1
Metapodial				MP	1	1 +	
Lateral M/P				MPG	1	1 +	
M/P distal ep.				DEMP	1	1 +	
3rd M/P distal ep.				DEMPC	1	1 +	
4th M/P distal e.				DEMPD	1	1 +	
Medial M/P				MPH	1	1 +	
Lateral M/P di. e.				DEMPG	1	1 +	

* = Alteration to the original ANATLIS coding

+ = Addition to the original ANATLIS coding

ANATLIS Codings - Carpals, Tarsals, Phalanges, Vertebrae & Others

<u>Carpals/Tarsals</u>			<u>Phalanges et. al.</u>		
Accessory Carpal	CARI	1 1	First Phalanx	APH	6 2*
Carpal 1	CARA	1 1	Second Phalanx	BPH	6 2*
Carpal 2	CARB	1 1	Third Phalanx	CPH	5 1*
Carpal 3	CARC	1 1	First Phal.prox.ep.	PEAP	1 1
Carpal 4	CARD	1 1	2nd Phal. prox.ep.	PEBP	1 1
2/3 Carpal†	CARJ	1 1	Prox. Sesamoid	PSES	1 1
Carpal Bone	CAR	1 1	Distal Sesamoid	DSES	1 1
Intermediate Carp.	CARF	1 1	Sesamoid	SES	1 1
Radial Carpal	CARG	1 1			
Ulnar Carpal	CARN	1 1	Atlas	VC01	6 1*
			Axis	VC02	1 1
Calcaneus	CAL	6 2*	Caudal Vertebrae	VD	1 1
Talus	AST	8 1*	Cervical Vertebrae	VC	1 1
Centroquartal	CQ	1 1	Lumbar Vertebrae	VL	1 1
Calcaneal Tub.ep.	CTE	1 1	Sacral Vertebrae	VS	1 1
Central Tarsal	CENT	1 1	Thoracic Vertebrae	VT	1 1
First Tarsal	TARA	1 1	Complete Sacrum	USA	1 1
Second Tarsal	TARB	1 1	Vertebrae	VT	1 1
Third Tarsal	TARC	1 1			
Fourth Tarsal	TARD	1 1	Rib	RIB	1 1
Fused 1/2 Tarsal	TARF	1 1	Long Bone	LBON	1 1
Fused 2/3 Tarsal	TARG	1 1	Long Bone Frag	LFRAG	1 1
Malleolus	MAL	1 1	Unidentified Frag.	FRAG	1 1

* = Alteration to the original ANATLIS coding

† = Addition to the original ANATLIS coding

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ANATLIS Codings - Bird

Coracoid	BCD	4	1*
Furcula	BFR	2	1
Sternum	BST	5	1*
Scapula	BSP	2	1*
Humerus	BFM	4	1
Radius	BRD	4	1*
Ulna	BUN	5	1*
Quadrato	BQD	1	1
Ulnare	BWRST	1	1
Carpometacarpus	BTM	5	1*
Os Coxa	BOC	4	1*
Synsacrum	BSS	1	1
Femur	BFM	8	1*
Tibiotarsus	BTB	8	1*
Tarsometatarsus	BMT	8	1*
Radiale	BCRP	1	1
Skull	BSK	5	1
Premaxilla	BEAK	1	1
Mandible	BJW	1	1
Cranium	BONS	1	1
Fibula +			

* = Alteration to the original ANATLIS coding

+ = Addition to the original ANATLIS coding

Handedness Coding Field

Undefined Fragment	- F
Whole	- W
Left	- L
Right	- R

Fragment Description Coding Field

Proximal	- P	100%	- 1
Midshaft	- M	25%	- 2
Distal	- D	< 25%	- 3
Anterior	- F	< 50%	- 4
Posterior	- B	50%	- 5
Dorsal	- S	> 50%	- 6
Ventral	- V	75%	- 7
Caudal	- A	> 75%	- 9
Cranial	- N		
Joint			
Surface	- J		
Medial	- E		
Lateral	- L		

Horn Core Coding Field

Bone very porous	- V	Naturally polled	- N
Bone porous	- H	Surgically polled	- P
Bone compact	- C	"Small Horned"	- S
Straight	- G	"Short Horned"	- D
Curved	- J	"Medium Horned"	- M
Twisted	- T	"Long Horned"	- L
Round Tip	- R	Type 1 ? male	- 1
Pointed Tip	- A	Type 2 ? female	- 2
Round Cross Section	- B	Type 3 ? castrate	- 3
Oval Cross Section	- Ø		
		Multiple Horns	- *

Gnawing Coding Field

Proximal	- P	Slight	- 1
Midshaft	- M	Moderate	- 2
Distal	- D	Severe	- 3
Anterior	- F		
Posterior	- B		
Dorsal	- S		
Ventral	- V	Canid	- C
Caudal	- A	Rodent	- R
Cranial	- N	Ungulate	- U
Joint		Human	- H
Surface	- J		
Medial	- E		
Lateral	- L		
Internal	- I		
Total	- T		

Butchery Coding Field

Proximal	- P	Axially(when not dorso-ventrally)	- &
Midshaft	- M	Dorso-ventrally(or reverse)	- Ø
Distal	- D	Posterioro-anteriorly(or reverse)	- ?
Anterior	- F	Oblique	- /
Posterior	- B	Medio-laterally	- *
Dorsal	- S		
Ventral	- V		
Caudal	- A	Burnt	- U
Cranial	- N	Chopped	- C
Joint		Split	- S
Surface	- J	Cut by knife	- K
Medial	- E	Sawn	- W
Lateral	- L	Method Repeated	- R
Internal	- I		
Total	- T		

Dental Pathology Coding Field

DI1	- E	Anterior surface	- A
DI2	- Y	Buccal surface	- B
DI3	- G	Occlusal surface	- K
DC	- W	Lingual surface	- L
DPM1	- V	Posterior surface	- P
DPM2	- U	Oblique	- Ø
DPM3	- T		
DPM4	- S	PM1 present	- O
		PM2 lacking	- /
I1	- 1	Last column M3 missing	- !
I2	- 2	Ante mortem loss	- (
I3	- 3	Ante mortem break	- I
C	- 4	Malocclusion	- M
		Root deformation	- D
PM1	- 5	Calculus	- &
PM2	- 6	Hyperplasia	-)
PM3	- 7	Caries	- H
PM4	- 8	Rotation	- @
M1	- 9		
M2	- :	Pathology in associated teeth	- *
M3	- ;	Pathology in associated jaw	- J
		Pathology in associated skeleton	- F
Crown	- C		
Neck	- N		
Root	- #		

Axial and Appendicular Pathology Coding Field

Proximal	- P	Ossified tendons	- 1
Midshaft	- M	Ossified interosseus space	- 2
Distal	- D	Ossified soft tissue	- 3
Anterior	- F	Pit	- U
Posterior	- B	Hole	- Ø
Dorsal	- S	Exostosis	- !
Ventral	- V	Fracture	- &
Caudal	- A	Porosity	- H
Cranial	- N	Resorption	- R
Joint		Pitting	- G
Surface	- J	Fused	- #
Medial	- E	Lipping	- Y
Lateral	- L	Distorsion	- Q
Internal	- I	Abrasion	- W
Totally	- T		

Sex and Age Coding Fields

Sex

Male - M
Female - F
Castrate - C

Age

Proximal - P	Not fused - N
Distal - D	Fused - F
Cranial - C	Just fused - J
Caudal - A	Suture - #
Lateral - @	Porous - H
Medial - I	
Dorsal - R	
Ventral - Q	

DI1 - E	I1 - 1
DI2 - Y	I2 - 2
DI3 - G	I3 - 3
DC - W	C - 4
DPM1 - V	Pm1 - 5
DPM2 - U	PM2 - 6
DPM3 - T	PM3 - 7
DPM4 - S	PM4 - 8

	M1 - 9
Not erupted - B	M2 - :
Not worn - M	M3 - ;
Enamel only worn -- L	
Worn - K	

Grant's Mandibular Tooth Wear Coding Field

<u>Teeth</u>	<u>Eruption Stages</u> (after Ewbank et al.)
DPM2 - U	Perforation in crypt visible (C) - 1
DPM3 - T	Tooth visible in crypt but
DPM4 - S	below head of bone (V) - 2
PM2 - 6	Tooth erupting through bone (E) - 3
PM3 - 7	Tooth half erupted ($\frac{1}{2}$) - 4
PM4 - 8	Tooth almost at full height
M1 - 9	but unworn (if used by us) (U) - 5
M2 - :	<u>Wear Stages</u> (after Grant)
M3 - ;	For DPM4, PM4, M1, M2, M3
	a - A
	b - B
	c - C
	d - D
	e - E
	f - F
	g - G
	h - H
	j - J
	k - K
	l - L
	m - M
	n - N
	o - O
	p - P
	and in addition in wear - W

Condition Coding Field

Proximal	- P	Charred	- *
Midshaft	- M	Stained	- G
Distal	- D	Ivorioid	- O
Total	- T	Calcined	- C
Anterior	- F	Brittle	- K
Posterior	- B	Friable	- #
Dorsal	- S	Shed	- H
Ventral	- V	Eroded	- E
Caudal	- A	Pitted	- U
Cranial	- N	Chalky	- Y
Joint			
Surface	- J	Scaled	- /
Medial	- E	Mottled	- @
Lateral	- L	Concretion-	W
Internal	- I		

Objects(Bone-Working) Coding Field

Proximal	- P	Sawn	- W
Midshaft	- M	Polished	- Y
Distal	- D	Perforated	- O
Total	- T	Drilled	- #
Anterior	- F	Punched	- *
Posterior	- B	Rasped/Filed	- R
Dorsal	- S	Incised	- I
Ventral	- V	Finished	
Joint		Object	- !
Surface	- J	Waisted	- K
Medial	- E	Shaved	- H
Lateral	- L	Split	- ;
Interior	- I		
Caudal	- A		
Cranial	- N		