A comparative analysis of faunal remains from some roman and native sites in northern England

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ORSTOPITUM 1966 Species:-..Bos taurus..... Sheet:-.....1.....

Bone:-...Horn Cores.....

	LEFT					RIGHT					
No.	Site No.	1	2	3	4	No.	Site No.	1	2	3	4
1	(BC64)	5.3	3.4	>15.0	-	?1	(MT66)	6.7	4.6	>19.0	>21.0
2	-	5.6app	4.5	>15.5	-	2	-	4.6	3.5	>15.0	-
3	(MH66)	5.7	4.2	>16.0	-	3	(MH66)	3.8	2.5	>10.0	>10.0
?4	-	7.7	6.4	>23.0	-	4	(EM64)	4.1	3.2	>12.0	>13.0
5	-	5.3	-	-	>11.5	5	-	4.1	2.9	>11.5	>14.0
6	-	3.3	2.4	>10.5	>8.0						
7	-	3.9	2.6	>11.0	-						
8	-	-	-	-	-						
9	-	-	-	-	-						

Measurement 1 = greatest diameter of horn core at base

Measurement 2 = least diameter of horn core at base

Measurement 3 = Circumference of horn core at base (all approximate)

Measurement 4 = length of outer curvature (all approximate)

Species:- Bos taurus

Bone:- Skulls

No.	Site No.	1	2	3	4	5	6
1		7.2	5.8	4.4	16.5	17.5	
2		-	-	-	-	-	
3		-	-	-	-	-	
4		-	5.3	3.0	14.0	12.0	

Measurements taken -

1. least breadth of single frontal bone
2. greatest diameter of horn core at base
3. least diameter of horn core at base
4. circumference of horn core at base (approximate)
5. length of outer curvature (approximate)

Species:-...Bos.taurus..... Sheet:-.....3.....

Bone:-...MAXILLA.....

LEFT			RIGHT		
No.	Site No.	Teeth	No.	Site No.	Teeth
1	-	M2	1	-	Dp2,3 M1,2,3
2		P.M.3,4 M1,2	2	-	M1,2,3
3	-	P.M.3 Dp3 M1,2,3	3		P.M.4 M.1.2
*4		P.M.4 M1,2,3	4	-	P.M.4 M1,3
5	-	M1,2	*5		P.M.4 M1,2,3
6	-	P.M.4 M1,2,3	6	-	M1,2,3
			7		P.M.2,3
			8	-	?M2

* left and right sides united

Species:-...Bos taurus..(Corbridge type)Sheet:-.....4.....

Bone:-MANDIBLE.....

LEFT			RIGHT		
No.	Site No.	Teeth	No.	Site No.	Teeth
1	DS66	PM3,4 M1,2,3	1	B?M64	PM2,4 M1,2,3
2	-	PM4 M1,3	2	AE64	PM3,4M1,2,3
3	-	PM3,4M1,2	3	-	PM3,4M1,2
4	-	teeth lacking	4	-	M2,3
5	-	PM2,3,4	5	AR6?	M2,3 & sockets
6	-	PM4 M1,2,3	6	IB64	PM3,4M1,2,3
7	-	M2,3	7	?B64	PM3,4M1,2,3
8	-	M2	8	-	PM2,3,4M1,2,3
9	-	M1,2,3	9	-	PM2,4M1,2,3
10	-	PM3,4 M1,2,3	10	-	PM4 M1,2,3
11	BA64	M3	11	-	M1,2,3
12	-	PM3,4 M1*	12	-	M2,3
13	-	PM3,4 M1,2,3	13	-	M2,3
14	-	PM4 M1,2,3	14	AF64	M1,2,3
15	-	PM2,3,4M1,2,3	15	-	M3
16	-	?M2	16	-	M3
17	-	teeth lacking	17	-	PM3,4
18	GH66	teeth lacking	18	-	PM2,3,4 M1,2,3
19	-	?PM2,3	19	-	PM2,3,4
?20	-	?PM3	20	-	PM2,3
			21	-	PM3,4M1,2,3*
			22	-	M1,2,3
			23	MV66	M2,3
			24	MT66	PM4 M1,2,3
			25	-	PM3,4 O

*Chillingham Type. 2nd premolar absent (No socket visible see 1911 Report page 241 of excavations at Corstopitum)

O = Circular hole

Species:- Bos taurus - Corbridge type Sheet:- 5

Bone:-

ATLAS

No.	Site No.	Max. length	Max. width	W/L
1	GY64	6.6+	8.7app	1.32
2	-	8.2+	12.7app	1.55
3	-	8.1+	12.4+	1.53
4	-	7.9+	-	-
5	-	8.4	13.2app	1.57
6	-	7.2+	-	-
7	-	8.9 app.	-	-
8	-	8.1+	-	-
9	FY64	-	-	-
10	-	-	-	-

+eroded

AXIS

No.	Site No.	Max. length	Max. width
1	-	12.5+	8.9
2	-	10.5	7.9+
3	-	10.7	8.1app
4	-	-	7.4app
5	-	-	9.8
6	-	-	10.1+
7	-	-	7.7+
8	M166	-	7.4+
9	-	-	8.3+
10	-	-	-
11	-	-	-
12	-	-	8.1+

CORSTOPITUM 1966

Species:- Bos taurus (Corbridge Type) Sheet:- 6

Bone:- SCAPULA

LEFT					RIGHT				
No.	Site No.	Length	Neck	Glenoid	No.	Site No.	Length	Neck	Glenoid
1	-	-	4.3	-	1	GJ64	-	5.0	5.4
2	GJ64	-	4.5	5.5	2	-	-	-	-
3	GP64	-	-	-	3	-	-	-	-
4	-	-	4.4	5.1	4	-	-	4.1	-
5	FY64	-	4.4	5.0	5	-	-	-	-
6	-	-	4.2	4.9	6	-	-	-	-
7	-	-	-	-	7	-	-	4.3	-
8	-	-	4.4	4.6+	8	-	-	4.4	4.8+
9	-	-	4.7	4.8+	9	-	-	4.4	-
10	-	-	4.1	-	10	-	-	4.7	-
11	-	-	4.0	4.6+ app	11	-	-	4.9	4.9+ app
12	-	-	4.1	4.8+ app	12	-	-	5.0	5.8
13	-	-	-	-	13	-	-	4.3	4.8+
14	-	29.4*	4.5	4.9+	14	-	-	4.4	-
15	DS66	-	4.3	-	15	-	-	4.2	5.0
16	-	-	4.8	-	16	-	-	4.7	-
17	-	-	4.3	5.8 app	17	-	-	-	5.1
18	-	-	-	-	18	GH66	-	4.7	5.7
19	-	-	4.8	-	19	DS66	-	4.3	4.9
20	-	-	5.4	5.7	20	-	-	-	6.0
21	-	-	5.1	5.2+	21	-	-	4.5	5.1
22	-	-	5.6	5.7	22	-	-	-	-
23	-	-	4.8	-	23	-	-	4.4	4.7+
24	-	-	4.6	5.2+	24	DS66	-	4.6	-
25	-	-	4.5	5.0+	25	-	-	4.5	-
26	-	-	4.2	4.9+	26	-	-	4.2	-
27	FN64	-	-	-	27	-	-	-	4.7+
28	-	-	5.0	4.5+	28	-	-	-	-
29	-	-	4.0	4.7+	29	-	-	4.2	-
30	-	-	5.5	-	30	-	-	4.7	5.1
31	-	-	4.4	5.2	31	-	-	4.6	4.9
32	-	-	4.3+	-	32	-	-	3.9	4.5
33	-	-	-	-	33	-	-	4.4+	-
34	-	-	4.2	5.0+	34	-	-	4.7	4.8+
35	ME66	-	5.1+	-	35	-	-	4.5	5.0
36	NS66	-	4.5	-	36	-	-	4.8	-
37	NS66	-	4.3	4.7 app	37	-	-	4.6	5.4+ app
38	MX66	-	4.6	5.1	38	-	-	4.5	5.5
39	MH66	-	4.3	4.8	39	-	-	4.6	5.1
40	MT66	-	4.0	-	40	-	-	4.2	4.8+
					41	-	-	4.6	5.2+

Bone:-...SCAPULA.....

LEFT Continued						RIGHT			
					No.	Site No.	Length	Neck	Glenoid
					42	-	-	4.6	4.9+
					43	NT66	26.5*	4.4	5.1
					44	NN66	-	4.5	5.0+
					45	NS66	-	4.5	-
					46	MH66	-	4.6	-
					47	MJ66	-	4.0	4.6+
					48	NK66	-	4.8	-
					49	MW66	-	5.0+	4.4+
					50	MY66	-	4.3	-

Meek & Gray ranges

Length = 31 - 37.5 c.m.

Neck = 3.5 - 6.2 c.m.

Glenoid = 4.2 - 6.5 c.m.

+eroded

* Exceeds range listed in 1910 Report

Species:-..Bos taurus - Corbridge type Sheet:-.....8.....

Bone:-....HUMERUS.....

LEFT No.	Site No.	Length	Condyle	RIGHT No.	Site No.	Length	Condyle
1	-	-	6.6	1	HI64	-	-
2	-	-	7.1	2	-	-	8.1*
3	-	-	-	3	-	-	6.7
4	-	-	6.6+				
5	NC66	-	-				

Meek & Gray range

length = 21.0 - 22.6 c.m

Condyle = 4.7 - 8.0 cm.

\+ eroded

* Exceeds range listed in 1910 report

Species:- Bos / taurus Corbridge type Sheet:- 9

Bone:- ULNA (Separate)

LEFT						No.	Site No.		RIGHT width (max)		
						1			3.8		
						2			3.6		
						?3	-	-	- +		
						?4	-	-	5.5		

+Length not recorded due to erosion

Species:- Bos taurus - Corbridge type Sheet:- 10

Bone:- RADIUS

LEFT						RIGHT					
No.	Site No.	Length	Prox	dist		No.	Site No.	Length	Prox	dist	
1	-	-	-	5.8		1	FY64	27.4	7.7	7.3	
2	GP64	-	-	-		2	AZ64	-	6.4app	-	
3	-	-	7.8	-		3	-	-	6.5app	-	
4	DS66	-	7.1+	-		4	-	-	-	5.7	
5	-	-	-	-		5	-	-	6.8+	-	
6	-	-	6.3+	-		6	-	-	-	-	
7	-	-	-	-		7	?L64	-	-	-	
8	-	-	6.3app	-		8	-	-	-	-	
9	-	25.5	-	5.7		9	-	-	-	-	
10	MI66	-	-	-							

Meek & Gray range

length = 23.4 - 32.5 cm.

distal = 4.8 - 7.7 cm.

+eroded

Species:- Bos taurus (Corbridge Type) Sheet:- 11

CORSTOPITUM 1966

Bone:- METACARPAL

LEFT No.	Site No.	Length	Prox.	Dist.	DB/L x 100/1	RIGHT No.	Site No.	Length	Prox.	Dist.	DB/L x 100/1
1	FY64	-	6.0	-		1	FP64	-	5.1	-	
2	JS58	19.0	5.3	5.8	30.5	2	DQ64	-	5.2	-	
3	-	-	5.6	-		3	-	-	5.3	-	
4	-	-	4.9	-		4	-	-	5.6	-	
5	-	17.2	4.7	4.9		5	-	- *	- *	-	
6	-	-	4.8	-	28.5	6	-	-	4.7	-	
7	GP64	-	-	6.9		7	-	-	-	5.1	
8	-	17.0	-	5.1	30.0	8	-	-	-	5.0	
9	GH66	17.7	5.0	5.2	29.4	9	-	-	4.7app	-	
10	-	-	4.8	-		10	-	17.6	4.9	5.0	28.4
11	-	-	5.3	-							
12	-	-	5.3	-							
13	MSL	-	4.6	-							
14	-	17.2	4.8	5.0	29.1						
15	-	-	-	5.2	[illegible]						
16	-	-	5.2	-							
17	-	-	-	5.0							
18	-	-	-	4.6							
19	-	-	-	5.2							
20	NN60	-	5.1	-							
21	ME66	-	4.9	-							
22	NO66	-	-	5.0							

Unable to assign to either left side or to right. Labelled X

X 1	-	-	-	-
X 2	-	-	-	5.5+
X 3	-	-	-	4.9
X 4	-	-	-	-
X 5	MH66	—	-	-
X 6	-	-	-	-

Meek & Gray range
length = 15.7 - 20.3 cm.
distal = 4.5 - 7.3 cm.

* = too eroded to measure but sufficiently preserved to classify right or left

+ = some erosion

app. = estimated length

/ = Butcher mark

Species:-. Bos taurus - Corbridge type Sheet:-.....

Bone:-...Os Coxae.....

LEFT			RIGHT		
No.	Site No.	max.diam of acetabulum	No.	Site No.	Max diam of acetabulum
1	7NE.XII	-	1	-	4.5+
? 2	-	4.6	2	-	5.1+
3	FY64	4.4+	3	-	-
			4	-	-
			5	-	-
			6	-	-
			7	-	6.Capp
			8	-	-
			9	7NE.XI	-
			10	OW64	6.6approx

Meek & Gray range 4.5 - 5.3cm.

+eroded

Species:- Bos taurus - Corbridge type Sheet:- 13

Bone:- FEMUR

LEFT					RIGHT				
No.	Site No.	Length	Condyles		No.	Site No.	Length	Condyles	
1	FB64	-	-		1	-	-	8.1	
2	-	-	-		2	-	*27.7	7.6	
3	GP64	-	-		3	DU64	-	-	
4	CJ64	-	-		4	-	-	9.0+	
5	NC66	-	-		5	-	-	-	

Meek & Gray range =
length 30.0 - 37.0
Condyles 6.3 - 9.0

* exceeds range listed in 1910 report

+ Eroded

Species:- Bos taurus - Corbridge type Sheet:- 14

Bone:- TIBIA

LEFT No.	Site No	Length	Prox	dist	RIGHT No.	Site No.	Length	Prox	dist
1	-	-	-	5.3	1	NW.XI	29.2app	-	5.5
2	-	-	7.0 app	-	2	-	*27.7	7.9	5.1
3	NT66	-	-	-	3	-	-	-	5.3
4	NQ66	-	-	-	4	-	-	-	4.5 approx
5	-	-	-	5.1	5	-	-	-	5.6
					6	-	-	-	5.6
					**7	OW64	-	7.4+	-

Meel & Gray ranges

length 28.5 - 36.5 cm.

distal range = 4.5 - 6.8 cm.

* Exceeds range listed in 1910 report

+ eroded

** = stained with blue powder

Species:- Bos taurus - Corbridge type Sheet:- 15

Bone:- ASTRAGALUS

LEFT			RIGHT		
No.	Site No.	Length	No.	Site No.	Length
1	-	5.8	1	FY64	5.4
2	-	6.3	2	GP64	5.9
3	AW64	5.8+	3	-	5.3
4	-	5.8	4	MJ66	-+
5	HE64	5.9	5	-	-+
			6	NE66	5.9+

+eroded

Species:-..Bos taurus - Corbridge type Sheet:-..16.....

Bone:-..CALCANEUM.....

LEFT			RIGHT		
No.	Site No.	Max Width	No.	Site No.	Max. Width
1	-	5.2	1	-	5.0
2	-	5.4	2	FX64	5.5+
3	-	5.6	3	BM64	-+
4	-	5.8	4	-	-+
5	-	-+	5	-	5.6+
6	-	5.5	6	-	5.8
			7	-	5.2
			8	MJ66	-+

+eroded

I found it meaningless to measure length due to butchering and erosion, therefore, have recorded maximum width

Species:-..Bos taurus.....(Corbridge Type) Sheet:-.....17.....

CORSTOPITUM 1966

Bone:-..METATARSAL.....

LEFT No.	Site No.	Length	Prox.	Dist.	DB/L x 100/1	RIGHT No.	Site No.	Length	Prox	Dist.	DB/L x 100/1
1	-	-	-	6.4		1	-	19.3	3.8	4.5	23.3
2	-	-	-	**6.6		2	-	-	4.1	-	
3	-	-	-	5.0		3	-	-	4.1	-	
4	AK64	-	-	4.8		4	-	-	3.9	-	
5	-	-	-	4.7		5	AL64	-	-	4.9	
6	-	-	-	4.5		6	-	-	-	4.9	
7	-	-	-	4.5		7	-	-	4.3	-	
8	-	-	-	4.6		8	-	-	4.5	-	
9	DS66	-	5.3	-		9	-	-	4.0	-	
10	-	19.9	4.2	4.6	23.1	10	-	-	4.2	-	
11	BG64	-	- *	-		11	-	-	4.1	-	
12	-	-	- *	-		12	-	-	-	5.0	
13	-	20.6	4.5+	5.3	25.7	13	-	-	-	4.7	
14	-	-	4.5	-		14	-	-	-	4.6	
15	-	-	4.2	-		15	DS66	-	-	4.9+	
16	-	-	4.5	-		16	-	-	- *	- *	
17	-	-	- *	-		17	-	20.6	4.2	4.8	23.3
18	-	-	-	-		18	-	-	-	4.5	
19	-	20.6	**6	5.6	27.2	19	-	-	-	4.7app	
20	-	-	4.1	-		20	-	-	-	-	
21	-	-	4.8	-		21	-	-	-	-	
22	-	-	4.5app	-		22	-	-	-	-	
23	-	19.4	4.4	-		23	-	-	4.2	-	
24	-	-	-	5.2		24	MX66	-	4.0	-	
25	NC66	-	-	6.1		?25	-	-	4.3+	-	
Unable to assign to either right or left. Labelled X											
X1	MY66	-	-	-							

Meek range

Length 18.1 - 24.4 cm.

Distal 4.2 - 6.5 cm.

** Exceeds range listed in 1969 report

+ = some erosion

app = estimated length

* = too eroded to measure but sufficiently preserved to classify right or left

Species:-.Bos taurus (Corbridge Type) Sheet:-.....18.....

Bone:-.PROXIMAL PHALANGE.....

No.	Site No.	Length	Width	No.	Site No.	Length	Width
1	ED64	5.6	2.9	28	AD64	5.4	2.6
2	DQ64	5.9+	3.5+	29	-	5.3	2.9
3	-	6.2	3.4	30	-	5.3	2.7
4	-	5.5	2.9	31	CF64	6.1	2.7
5	-	6.0	2.8	32	FY64	5.4	2.5
6	EM64	5.6	2.7	33	-	6.0+	2.0+
7	FM64	5.5	2.9	34	-	4.9	2.6
8	AE64	5.5	2.7	35	-	5.3	2.7
9	-	5.9	2.4	36	-	5.2	2.8
10	-	5.0	2.6	37	-	6.1	3.3
11	-	5.1	2.6	38	GH66	5.7	2.5
12	HE64	5.2	2.7	39	-	5.4	3.0
13	CD64	5.2	2.5	40	-	5.8	2.8
14	AD64	5.8	2.6	41	-	5.3+	2.3+
15	FJ(1)64	5.5	2.3	42	-	6.1	2.6
16	FY64	5.7	2.1	43	-	5.2+	2.5
17	DQ64	5.8+	2.5+	44	-	5.5	2.7
18	IV64	5.4	2.3	45	-	6.0	3.1
19	AX64	5.5	3.0	46	-	5.2	2.5
20	FM64	6.0	2,8	47	-	5.5	2.6
21	AD64	6.6	3.2	48	MX66	5.8	3.1
22	CF64	6.8	3.2	49	MJ66	6.1	3.1
23	-	5.7	3.0	50	MX66	5.5+	2.6
24	-	5.6	3.1	51	NK66	5.9+	3.0
25	?CD64	5.2	2.8	52	-	5.2	2.8
26	BE64	5.4+	2.5	53	ME66	5.6	2.1
27	-	5.3	2.8				

O = Circular hole

+eroded

Species:- Bos taurus - Corbridge type Sheet:- 19

Bone:- MIDDLE PHALANGE

No.	Site No.	Length	Max. Width
1	MN64	4.3	3.1
2	?	4.1	3.2
3	CY64	4.6	3.4
4	CF64	4.7	3.3
5	-	4.4	3.2
6	-	4.4	3.4
7	-	4.0	2.9
8	-	3.8	2.8
9	-	3.9	2.7
10	DQ64	3.8	2.9
11	-	3.4+	2.9
12	-	3.6	2.5
13	-	4.0	2.5
14	AB64	3.6	2.5
15	B?64	3.3	2.7
16	-	3.7+	3.0+
17	AC64	3.9	2.6
18	DQ64	3.9	3.0
19	AH64	3.7	2.3
20	AU64	3.7	2.7+
21	-	3.4	2.8
22	-	3.8	2.8
23	HK64	4.4	3.1
24	[illegible]	3.8	2.6
25	-	4.5	2.2

+ eroded

Species:- Bos taurus - Corbridge type Sheet:- 20

Bone:- TERMINAL PHALANGE

No.	Site No.	Length	Max Width
1	GR64	7.3+	3.2
2	-	5.8	2.0
3	-	6.5	2.1
4	GQ64	6.1	2.2
5	DQ64	6.0	2.2
6	-	6.4	2.1
7	-	5.9	2.1
8	EG64	6.4	2.2
9	-	6.1	2.2
10	-	6.7	2.5
11	A164	7.0	2.6
12	-	6.2	2.0
13	CM64	5.9	2.0
14	-	5.3	2.1
15	AN64	4.7+	1.8
16	-	5.9+	2.3+
17	AX64	8.0	2.8
18	[illegible]	5.3	1.9
19	-	6.5	2.3
20	-	6.0	2.4
21	-	5.8	2.1
22	-	6.9	2.4

+eroded

Species:-...Ovis aries.....

Bone:-..SKULL.....

	No.	Site No.	Lamda to Basion	Width Condyles	Length Condyles
*	1	ME66	6.4cm	4.3+	2.0+

* Much of occipital bone sliced away. Bored hole in left temporal bone

+ eroded

ORSTOPITUM 1966

Species:- Ovis aries Sheet:- 22

Bone:- MAXILLA

LEFT No.	Site No.		RIGHT No.	Site No.	
1	-	$M_{1,2}$	1		$M_{1,2,3}$
2		$P.M._{2,3}$	2	-	$M_{1,2,3}$

Species:-Ovis aries..... Sheet:-23.....

Bone:-MANDIBLE.....

LEFT				RIGHT			
No.	Site No.	Teeth	Stage	No.	Site No.	Teeth	Stage
1	-	$M_{2,3}$	w.	1	-	$M_{3,2}$	x
2	-	m_3	r	2	-	M_3	x
3	-	$P_{3,4}$ M_1 all in wear	x	3	-	$M_{3,2,1}$ $m_{3,2}$ - M	r
4	-	$M_{1,2,3}$ all worn	z	4	-	M_1 $m_{3,2}$ Probably	r
5	-	$P_{2,3,4}$ $M_{1,2,3}$	v	5	-	M_1 $m_{3,2}$ Probably	r
6	-	$m_{1,2,3}$	r	6	-	$M_{3,2,1}$ $P_{4,3}$	u
7	MY66	$P_{3,4}$ $M_{1,2,3}$	z	7	-	$M_{2,1}$ $P_{4,3}$ Probably	w or x
8	MW66	m_2	?r	8	-	$M_{2,1}$ $m_{3,2}$	r or s
				9	-	M_1 $m_{3,2}$	r or s
				10	-	M_1 $P_{4,3}$	x
				11	NT66	M_1 $m_{3,2,1}$	r or s
				12	-	$M_{3,2,1}$ broken $m_{3,2}$	p
				13	-	$M_{3,2,1}$ $P_{4,3,2}$	w

Stages according to Ewbank, Phillipson, Higgs(1964)

Species:-Ovis aries

Sheet:-24

Bone:-SCAPULA

	LEFT				RIGHT			
No.	Site No.	Glenoid	Neck		No.	Site No.	Glenoid	Neck
1		-	2.0*		1	-	*2.4	1.7
2	-	*2.5+	1.8		2	-	-	1.5
3	-	*2.6	1.8		3	-	-	1.6
4	-	-	1.7		4	-	*2.5	1.8
5		2.3+	1.6					
6	-	*2.7+	1.8					
7		2.2+	1.7					
8		2.2+	1.6					
9		-	1.3					
10	-	*2.8	-					

* exceeds range listed in 1910 report

Meek & Gray ranges

Glenoid 1.9 - 2.3 cm.

Neck 1.1 - 1.8 cm.

+eroded

Species:- Ovis aries Sheet:- 25

Bone:- HUMERUS

LEFT					RIGHT				
No.	Site No.	Length	Prox	distal	No.	Site No.	Length	Prox	distal
1	-	-	-	2.6	1	-	-	-	2.6+
2	-	-	-	2.4	2	-	-	-	2.6+
3		-	-	2.6	3	-	-	-	*3.4
4	-	-	-	2.6+	4	-	-	-	2.6
5	-	-	-	2.3					

Meek & Gray ranges

lengths - Nil

distal 2.2 - 2.8 c.m.

* exceeds range listed in 1910 report

\+ eroded

Species:- Ovis aries

Sheet:- 26

Bone:- ULNA

LEFT						RIGHT					
No.	Site No.	Length	Max Width			No.	Site No.	Length	Max. width		
1	-	-	2.0			1		-	2.9		
2		-	2.6			2		-	2.6		
3		-	2.8			3		-	2.4+		
4	-	-	2.4+			4	-	-	2.4		
						5	-1	-	2.8+		
						6	-	-	2.1+		
						7	-	-	2.4		
						8	-	-	2.3		

+eroded

Lengths not recorded due to extensive erosion

Species:- Ovis aries Sheet:- 27

Bone:- RADIUS

No.	Site No.	Length	Prox	dist
1	-	-	3.3	-
2	-	-	3.0	-
3	-	-	2.7	-
4	GW62	14.1+	2.7	-
5	GR64	-	-	2.4*
6	-	14.2	2.5	2.4*
7	-	-	-	2.4*
8	-	-	3.2	-
9	-	-	2.7	-
10	-	-	3.0	-
11	-	-	-	-
12	-	-	2.9	-
13	MJ66	-	2.7+	-
14	MJ66	13.0	2.6	2.4*
15	-	-	2.7+	-

No.	Site No.	Length	Prox	dist
1	-	-	2.7	-
2	-	-	-	2.6*
3	-	12.5	2.6	2.3*
4	IE64	-	-	-
5	-	12.9	2.5	2.3+*
6	-	-	-	2.2+*
7	-	-	-	-
8	-	-	2.4	-
9	-	-	2.5	-
10	-	-	2.3+	-
11	-	-	-	2.5*
12	-	-	-	2.4*
13	-	-	-	2.4*
14	-	-	2.5	-
15	ME66	-	2.4	-

Meek & Gray ranges

length 12.0 - 14.5cm) 2 specimens only

distal 1.9 - 2.0cm)

* exceeds range listed in 1910 report

+ eroded

Species:- Ovis aries

Bone:- FEMUR

LEFT						RIGHT					
No.	Site No.	Length	Proximal	Distal		No.	Site No.	Length	Prox.	dist.	
1	-	-	-	2.9		1	-	-	-	-	
2	-	-	-	-		2	-	-	-	-	
3	-	-	-	-		3		-	-	-	
4	-	-	-	-		4	-	-	-	-	
						5	-	-	-	-	
						6	-	-	-	-	
						?7		-	-	3.3+	

All butchered and/or eroded

Meek & Gray 2 specimens only.
length 13.8 cm.
Condyle 2.9 cm.

Species:- Ovis aries Sheet:- 29

Bone:- TIBIA

LEFT						RIGHT				
No.	Site No.	Length	Prox.	Distal		No.	Site No.	Length	Prox.	Distal
1	-	-	-	-		1	-	-	-	2.3*
2	-	-	-	2.1*		2	HE64	-	-	-
3	-	-	-	2.1*+		3?	-	-	-	-
4	-	-	-	2.2*+		4	-	18.4	3.3+	2.3*
5	?64	-	-	2.4*		5	-	-	-	2.3*
6	-	-	-	2.4*						
7	-	-	-	2.2*+						
8	-	-	-	-						
9	-	-	-	-						
10	-	-	3.6	-						
11	-	-	2.0+	-						
12	-	-	-	2.2*						
13	ME66	-	-	2.1*						
14	MI66	-	-	2.2*						

Meek & Gray ranges

Length 17.3 - 19.5 (from 3 specimens only)

Distal 1.5 - 1.8 c.m.

+ eroded

* Distal measurements exceed range listed in 1970 Report.

Species:- Ovis aries

Sheet:- 30

Bone:- ASTRAGALUS

LEFT						RIGHT					
No.	Site No.	Length	Width			No.	Site No.	Length	Width		
1	-	2.5	1.8			1		2.7	1.9		
2	-	2.4+	1.8+			2	-	3.0	1.9		
3 incinerated	-	2.5	1.6+			3		2.7	1.9		

+eroded

Species:-Ovis aries..... Sheet:-.....31.....

Bone:-CALCANEUM

LEFT						RIGHT					
No.	Site No.	Length	Max width			No.	Site No.	Length	Max width		
1		4.3	1.8			1	-	4.8	1.8+		

+eroded

Species:- Ovis aries

Bone:- METACARPAL

LEFT						RIGHT					
No.	Site No.	Length	Prox	dist.		No.	Site No.	Length	Prox.	dist	
1	-	-	1.9	-		1	-	-	2.1	-	
2	-	11.3	2.0	2.2		2	AB64	-	2.1	-	
3	-	-	1.9	-		3	-	12.8	2.1	2.3	
4	-	-	2.1	-		4	-	12.3	2.1+	2.3+	
5	CD64	-	2.1	-		5	EM64	-	2.0	-	
6	-	10.7	1.9	2.1		6	-	-	2.0+	-	
7	-	12.3	2.1+	2.4+		7	-	12.2	2.0	2.5*	
8	NE66	11.4	1.9	2.3+		8	-	-	2.1+	-	
9	MH66	-	-	-							
10	MJ66	-	1.8	-							

Meek & Gray ranges

length = 10.6 - 13.5 c.m.

distal = 2.0 - 2.4 c.m.

+ eroded

* exceeds range of 1910 report

Species:- Ovis aries Sheet:- 33

Bone:- METATARSAL

LEFT No.	Site No.	Length	Prox.	distal		RIGHT No.	Site No.	Length	Prox.	dist.
1	-	-	1.6+	-		1	-	-	1.7	-
2	-	-	1.8	-		2	-	-	1.6+*	-
3	-	12.0	1.7	1.9		3	AE64	11.8	1.7	1.9+
4	AE64	-	2.0	-		4	-	-	1.8	-
5	-	-	1.9	-		5	-	-	-	2.1
6	-	-	1.7	-		6	8SW	12.0	1.6*	1.9
7	-	-	1.9	-		7	FF64	-	2.0	-
8	-	-	1.7	-		8	-	-	1.7	-
9	-	-	1.4app	-		9	BR64	-	1.7	-
10	-	12.2	1.8	2.1	S*	10	-	-	1.7	-
11	-	12.6	-	2.0		11	-	-	1.7+	-
12	-	-	1.7	-		12	-	-	1.7	-
13	NE66	12.5	1.7	2.0		13	-	-	1.6*	-
						14	-	-	1.9+	-
						15	MW66	-	1.8	-
						16	MX66	-	1.7	-
Unable to assign to either right or left						17	MJ66	12.5	1.6+*	2.0
1	-	-	-	2.4		18	NU66	12.5	1.7+	2.0
2	-	-	-	2.2						
3	-	-	-	-						
4	-	-	-	2.2						
5	MX66	-	-	-						
? 6	NE66	-	-	-						

Meek & Gray Ranges

length 10.8 - 12.8 C.m.

distal 1.7 - 2.1 C.m.

+ some erosion

app = estimated length

S* = bone stained by a pigment

* smaller than range listed in 1910 Report

Species:-..Ovis aries..... Sheet:-34.....

Bone:-..PHALANGES.....

No.	Site No.	Length	(Not assigned to either right or left)
1		3.3	
2	-	3.4	
3	-	3.0	
4	-	3.0	
5	-	2.8	
6	-	2.7	
7		2.0	

Species:- Sus scrofa

Bone:- MAXILLA

LEFT No.		RIGHT No.	
1	$P.M._{2,3,4}$	1	$P.M._{4}$ $M_{1,2,3}$
2	M_1 broken. $M_{2,3}$	2	$P.M._{3,4}$ M_1
3	$P.M._{4,d}$ M_2	3	$P.M._{4}$ $M_{1,2,3}$
4	D_{p3} being shed	4	$P.M._{2,3,4}$ $M_{1,2}$ broken
5	C, $P.M._1$		
6	$P.M._{4}$ $M_{1,2}$		
7	$P.M._{2,3,4}$ $M_{1,2}$ broken		
8	$P.M._{3,4}$ $M_{1,2,3}$		
9	$P.M._{4}$ $M_{1,2,3}$		
10	M_3		

Species:- Sus scrofa ..... Sheet:- .....

Bone:- MANDIBLE .....

No.	Site No.	LEFT	No.	Site No.	RIGHT
1	-	$M_{2,3}$	1	-	$M_{3,4}$
2	-	$I_{1,2}$ C_1 $P.M._{3,4}$ $M_{1,2,3}$ plus I_1, C_1 (right)	2		$M_{3,4}$
3	-	M_3	3	-	M_1 plus R & L rami
4	-	$M_{2,3}$	4	-	?M_2
5		M_3 broken	5	-	$P.M._{3,4}$ $M_{1,2,3}$
6	-	M_3	6	-	M_3
7	-	$M_{1,2}$	7	-	C_1 $P.M._{3,4}$
			8	-	$P.M._{3,4}$ M_1
			9	-	C_1 $P.M._{3,4}$ $M_{1,2}$
			10	-	M_2
			11	-	$P.M._{2,3}$
			12	-	$P.M._3$ M_1 broken
			13	-	$P.M._{3,4}$
			14	-	$M_{1,2,3}$
			15	-	I_3 $P.M._{1,3,4}$ $M_{1,2,3}$
			16	-	$M_{2,3}$
			17	-	$M_{1,2}$

Species:- Sus scrofa ..... Sheet:- 37 .....

Bone:- SCAPULA .....

LEFT				RIGHT			
No.	Site No.	Glenoid	Neck	No.	Site No.	Glenoid	Neck
1	-	-	2.0	1		2.7+	2.0
2	-	-	1.9	2		-	-
3		-	-	3	-	-	2.2
				4	-	-	2.0
				5	-	-	-+
				6		-	-

Meek & Gray ranges

length 14 - 17.1 cm.

Neck 1.7 - 2.3 cm.

Glenoid 2.4 - 2.9 cm.

+ eroded

Species:- Sus scrofa

Sheet:- 38

Bone:- HUMERUS

LEFT No.	Site No.	Length	Prox.	Dist.	RIGHT No.	Site No.	Length	Prox.	Dist.
1	[illegible]	-	-	3.3+*	1	-	-	-+	-+
2	-	-	-	3.5+*					
?3	-	-	-	3.5+*					

+eroded

*exceeds range listed in 1910 report

Meek & Gray ranges

length - NIL

distal 2.4 - 2.8 cm.

Species:- Sus scrofa

Sheet:- 39

Bone:- ULNA

No.	LEFT Site No.	Max. width	RIGHT
1		1.7	
2	-	2.1	

Meek & Gray the ranges
one right ulna
Olecranon = 2.3 cm

Lengths not recorded because of erosion or fracture

Species:-Sus scrofa..... Sheet:-.....40.....

Bone:-RADIUS.....

LEFT No.	Site No.	Length	Prox	dist		RIGHT No.	Site No.	Length	Prox	dist	
1	-	-	-	-		?1 *	-	-	-	-	distal shaft only
						?2 *	-	-	-	-	distal articulation only

No measurements possible

* These two fragments fit together

Species:- Sus scrofa ..... Sheet:- .....41.....

Bone:- METATARSALS and or METACARPALS .....

No.	Site No.	Length (Prox distal) not needed
1	-	7.3
2		6.5
3		-
4		-
5	-	-
6	-	-
7	-	-
8	-	-
9		-
10	-	-
11		-
12		6.5
13	-	-
14	-	-
15	-	-
16	-	-
17		-
18	-	-

Meek & Gray publish no details

Species:- Sus scrofa ..... Sheet:- 42 .....

Bone:- FEMUR .....

LEFT							Site No.	RIGHT Length	Prox.	distal
						1	[illegible]	-	-	4.1
						2	- (condyles only)	-	-	4.3

Meek & Gray - 12 specimens - No measurements

Species:- Sus scrofa

Sheet:- 43

Bone:- TIBIA

LEFT						RIGHT					
No.	Site No.		Length	Prox.	dist	No.	Site No.		Length	Prox	dist.
1			-	-	-	1	-		-	-	eroded
2	-		-	-	eroded	2			-	-	eroded
3			-	-	-	?3	-		-	4.5	-
						?4			-	-	-

Meek & Gray ranges.

length - 1 specimen at 18·0cm.

distal 5 specimens at 2.1 cm

Species:-Sus scrofa.....

Sheet:-.....

Bone:-..ASTRAGALUS.....

									RIGHT			
							Site No.		Length	Width		
						?1	-		4.0+	2.3+		

+eroded

Species:-..Sus.scrofa..... Sheet:-....45.....

Bone:-CALCANEUM.....

LEFT						RIGHT					
No.	Site No.	Length	Max. width			No.	Site No.	Length	Max. width		
1	-	7.7+	3.2		?	1	-	6.8	2.7+		
2		7.0+	2.3+		?	2	-	6.0+	2.3+		
3		6.5+	2.6			3	-	-+	3.0		

+eroded.

Species:- Sus scrofa

Bone:- PHALANGES

No.	Site No.	Length	Not classified as right or left
1		1.7	
2	-	2.3	
3		?2.2	
4		2.4	
5		2.6	
6		2.7	
7		3.0	
8		3.2	
9		3.3	

Species:- Equus caballus Sheet:- 47

Bone:- SKULL

No.	Site No.	Length of occipital Condyle	Width of Condyles	Crest to Basion							
1	-	4.7	8.6	10.0							
2		4.3	8.1	9.2							

RSTOPITUM 1966

Species:-Equus caballus.....

Sheet:-....48.....

Bone:-....MAXILLA.....

LEFT							RIGHT						
1	–	P.M. 2,3,4		M 1,2,3			1	P.M. 2,3,4		M 1,2,3			
?2	–	P.M. 2					2	I 2,3		C 1			
3		C 1					3	?P.M. 2					

Species:- Equus caballus ..... Sheet:- 49 .....

Bone:- MANDIBLE .....

LEFT						RIGHT					
1	-	I_5 C_1	P.M. 2&3			1		I_6	C (broken)	P.M.	M_{123}
2	-	$I_{1\&2}$				2	-	P.M. 1,2,3			
3	-	I_5 C_1	P.M. 2			3	-	$I_{2,3}$			

Species:- Equus caballus Sheet:-

Bone:- SCAPULA

	LEFT				RIGHT							
No.	Site No.	Length	Neck	Glenoid								
1	-	-	5.6	6.1*								
2	-	33.2+	6.5	5.9								

+ eroded

* exceeds range listed in 1910 Report

Meek & Gray ranges

No lengths given

Neck 5.4 - 6.7cm.

Glenoid 4.9 - 6.0cm.

CORSTOPITUM 1966 Species:-.Equus caballus..... Sheet:-....51.....

Bone:-..RADIUS.....

LEFT No.	Site No.	Length	Prox.	dist.		RIGHT No.	Site No.	Length	Prox	dist.	
1	-	31.9	7.5	6.0	U.A.	1	-	34.7*	7.4	6.4	U.A. O
2	-	32.4	7.1	5.8	U.A.	2	EP63	33.4	7.2+	6.4	
3	-	-	-	6.0+							

Meek & Gray ranges

Length	29.2 –	33.9	c.m.
distal	5.2 –	6.4	c.m.

* Exceeds range listed in 1910 report

+ eroded.

U.A. = Ulna Attached

O Circular hole

Species:-..Equus caballus..... Sheet:-.....52.....

Bone:-.Metacarpal.....

LEFT No.	Site No.	Length	Prox.	distal		RIGHT No.	Site No.	Length	Prox.	dist.
1	-	24.0*	5.6	5.4*		1	-	23.2	5.8*	4.9
2	-	23.2	5.8	4.9	✱	2	-	22.3	5.0	5.3*
3	-	22.2	5.4	5.0						

Meek & Gray ranges

Length = 21.7 - 25.5 c.m

distal = 4.3 - 5.2 c.m.

✱ arthritic distal end and part of shaft

* Exceeds range listed in 1910 report.

Species:- Equus caballus Sheet:- 53

Bone:- OS COXAE

LEFT				RIGHT			
No.	Site No.	Maximum diameter of acetabulum		No.	Site No.	Maximum diameter of acetabulum	
O 1	-	5.6		1	-	5.6	
2	-	5.8	fused	2	-	5.8	

O = Circular hole

Species:-..Equus caballus..... Sheet:-.....54.....

Bone:-....TIBIA.....

LEFT No.	Site No.	Length	Prox.	Dist.		RIGHT No.	Site No.	Length	Prox.	Dist.	
1	-	32.8	8.9	*7.2		1	-	37.3	10.5	8.2*	o
2	-	30.8	8.2	*6.1		2	CN63	*38.3	10.5	8.1*	o
						3	-	35.2	10.0	7.6*	o
						4	-	33.0+	8.7	6.7*	
						5	-	-	-	6.6*	

Meek & Gray range

length 29.3 - 37.9 c.m.

distal 4.3- 5.5 c.m.

* Exceeds range listed in 1910 report

+eroded

o Circular hole

Species:- Equus caballus ..... Sheet:- 55 .....

Bone:- ASTRAGALUS .....

LEFT							RIGHT						
No.	Site No.	Length					No.	Site No.	Length				
1	-	5.9					1	-	6.3				
2	-	5.4											

Species:- Equus caballus

Bone:- CALCANEUM

LEFT				RIGHT			
No.	Site No.	Length	Max. width	No.	Site No.	Length	Max. width
				1		10.4+	5.4+
				2		11.2	5.9
				3		-	5.6

+eroded

Species:- Equus caballus Sheet:- 57

Bone:- METATARSAL

LEFT No.	Site No.	Length	Prox	Dist		RIGHT No.	Site No.	Length	Prox.	Dist.
1	-	27.9	4.7	*4.7		1	-	26.9	5.2	*5.2
2	-	23.8	4.2	4.2		2	OE64	23.7	4.2	4.2+
? 3	-	-	-	-	N.C.					

Meek & Gray range
length 22.6 - 29.0 c.m
distal 3.5 - 4.5 c.m.

* Exceeds range listed in 1919 report

+ eroded

N.C. = not classified as being either right or left

Species:-.Equus caballus.....

Bone:-..PHALANGES. I, II and III.

No.	Site No.	Length	Prox. width	
I				
1	-	7.8	5.4	
2	-	8.5	5.1	
3	-	8.6	5.8	O
4		9.6	5.9	
5		9.3	5.4	
6		7.0	5.0	
II				
1	-	5.4	5.9	
III				
1	-	6.5	7.8	
2	-	7.0	8.0	
3	-	7.4	7.9	
4	-	7.4	7.6	
5	-	6.5+	7.4	

+eroded

O = hole

Species:- Cervus elaphus Sheet:-

Bone:- METACARPAL

No.	Site No.	Length	Prox.	dist.
1	-	27.2	4.2 app	4.2

Prox = width of proximal articulatory surfaces
Dist = width of distal articulatory surfaces
app = estimated distance

Species:-.Canis.familiaris..... Sheet:-.....60.....

Bone:-.....MANDIBLE.....

LEFT			RIGHT		
No.	Site No.		No.	Site No.	
1	-	$P.M._{1,2,3}\ M_{1,2}$	1	-	$P.M._{2,3}\ M_{1,2}$
2	-	ramus - no teeth	2	-	ramus - no teeth
			3	-	$P.M._{1,2}\ M_{1}$

Species:-..Canis familiaris..... Sheet:-....61

Bone:-..SCAPULA.....

	LEFT Site No.	Glenoid	Neck										
No.													
?1	-	2.7	2.5										

Species:- Canis familiaris Sheet:- 62

Bone:- HUMERUS

	LEFT					RIGHT				
No.	Site No.	Length	Prox	Distal		No.	Site No.	Length	Prox	Distal
1	JL64	14.9	2.5	2.8*		1	BN62	16.7*	2.8	3.2*
2	-	18.4*	3.0	3.3*+		2	-	12.8	2.4	2.5*
? 3	-	-	-	-	?	3	-	-	-	2.3*

Meek & Gray ranges

length 8.5 - 15.0cm.

distal 1.3 - 2.0 cm.

Board used not calipers

* Exceeds range listed in 1910 Report

+ eroded

Species:-..Canis familiaris..... Sheet:-.....63.....

Bone:-...RADIUS.....

LEFT						RIGHT					
No.	Site No.	Length	Prox.	dist.		No.	Site No.	Length	Prox.	dist.	
1		-	1.5	-		1	-	-	1.5	-	
2		-	2.0	-							

Species:-FOX - Vulpes vulpes.... Sheet:-64.....

Bone:-..Radius.....

No.	LEFT Site No.	Length	Prox.	dist		No.	Site No.	RIGHT Length	Prox.	dist.	
						1	-	-	-	-	
							eroded	no measurement taken			

FEMUR

	LEFT							RIGHT			
						?1		-	-	1.8	

Species:- Aves Sheet:- 65

Bone:- TIBIO TARSUS

LEFT						RIGHT					
No.	Site No.	Length				No.	Site No.	Length			
1	-	—				1	-	-			
2	-	-									

Species:- Aves Sheet:- 66

Bone:- FEMUR

LEFT No.	Site No.	Length	RIGHT No.	Site No.	Length
1	NE66	—	1	-	-
2	MF66	-	2	8SW	-
3	-	-			

Species:- Aves Sheet:- 67

Bone:- HUMERUS

LEFT						RIGHT					
No.	Site No.	Length				No.	Site No.	Length			
1	-	-				1	-	-			

Species:-...Aves..... Sheet:-.....68.....

Bone:-..Possible RADIUS..... (Not assigned right or left)

No	Site No.	Length
1		—
2		—
3	CI64	—
4	CP60?	—

STOPITUM 1966

Species:- Aves

Sheet:- 69

Bone:- ULNA

LEFT

RIGHT

No.	Length
1	6.9

Species:-....Pisces..... Sheet:-.....70.....

Bone:-....Vertebrae.....

2 eroded vertebrae

APPENDIX 'A'

TOTALS OF ALL BONES RECOVERED AT CORSTOPITUM DURING 1966. DISTAL AND PROXIMAL FRAGMENTS ARE INCLUDED

BONE	SPECIES						
	OX	HORSE	SHEEP	PIG	DOG	FOX	RED DEER
Skull	4	2	1	-	-	-	Tines with 7
Maxilla	14	6	4	14	-	-	Skull -
Mandible	45	6	21	24	5	-	Fragments -
Atlas	10	-	2	1	1	-	-
Axis	12	-	-	-	-	-	-
Scapula	90	2	14	9	1	-	-
Humerus	8	-	9	4	6	-	-
Ulna	4	-	12	2	-	-	-
Radius	19	5	30	2	3	1	-
Metacarpal	38	5	18	18	-	-	1
Os Coxae	13	4	15	-	-	-	-
Femur	10	-	11	2	-	1	-
Tibia	12	7	19	7	-	-	-
Fibula	-	-	-	?2	-	-	-
Astragalus	11	3	6	1	-	-	-
Calcaneum	14	3	2	6	-	-	-
Metatarsal	51	5	37	-	-	-	-
Prox. Phalange	53	6			-	-	-
Middle Phalange	25	1	7	9	-	-	-
Terminal Phalange	22	5			-	-	-
Horn Cores	14	-	-	-	-	-	-
	469	60	208	101	16	2	8

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APPENDIX 'B'

CORSTOPITUM. TABLE SHOWING TOTALS OF ENTIRE BONES OR THE FRAGMENTS DISPLAYING A DISTAL ARTICULATORY SURFACE

SPECIES

BONE	OX 1910 L	OX 1910 R	OX 1966 L	OX 1966 R	OX total	HORSE 1910 L	HORSE 1910 R	HORSE 1966 L	HORSE 1966 R	HORSE total	SHEEP 1910 L	SHEEP 1910 R	SHEEP 1966 L	SHEEP 1966 R	SHEEP total	PIG 1910 L	PIG 1910 R	PIG 1966 L	PIG 1966 R	PIG total	RED DEER 1910 L	RED DEER 1910 R	RED DEER 1966 L	RED DEER 1966 R	RED DEER total
SKULL	188	-	4	-	192	11	-	2	-	13	-	-	1	-	1	-	-	-	-	-	Tines		5	2	5 max.
MAXILLA	-	-	6	8	14	-	-	3	3	6	-	-	2	2	4	-	-	10	4	14	Bearing Skull Bone				
MANDIBLE	-	-	20	25	45	-	-	3	3	6	25	24	8	13	70	19	10	7	17	43	-	-	-	-	-
ATLAS	-	-	10	-	10	-	-	-	-	-	-	-	3	-	3	-	-	1	-	1	-	-	-	-	-
AXIS	-	-	12	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCAPULA	152	144	40	50	386	3	1	2	-	6	6	5	10	4	25	7	7	3	6	23	3	3			6
HUMERUS	57	67	5	3	132	10	6	-	-	16	6	5	5	4	20	8	7	3	1	19	-	2	-	-	2
ULNA	-	-	-	4	4	-	-	-	-	-	1	1	4	8	14	-	1	2	-	3	-	-	-	-	-
RADIUS	48	47	3	3	101	5	7	2	2	16	3	4	6	8	21	1	1	1	1	4	1	3			4
METACARPAL	84	95	12,5,3		199	7	6	3	2	18	21	20	9	6	56	-	-		13*	13	2	-	1	-	3
OS. COXAE	23	25	3	10	61	4	4	2	2	12	2	5	5	10	22	5	5	-	-	10	1	-	-	-	1
FEMUR	15	14	1	4	34	5	4	-	-	9	1	1	1	2	5	3	9	-	2	14	-	1	-	-	1
TIBIA	51	47	3	6	107	7	7	2	5	21	11	10	12	4	37	3	3	2	3	11	-	-	-	-	-
FIBULA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-
ASTRAGALUS	-	-	5	6	11	-	-	2	1	3	-	-	3	3	6	-	-	-	1	1	-	-	-	-	-
CALCANEUM	-	-	6	8	14	-	-	-	3	3	-	-	1	1	2	-	-	3	3	6	-	-	-	-	-
METATARSAL	108	100	15,1,11		235	1	7	2,1,2		13	14	13	9	8	44	-	-	-	-	-	-	-	-	-	-
PROX. PHAL.	-	-	53	-	53	-	-	6	-	6	-	-	)7	-	7	-	-	)-	-	-	-	-	-	-	-
MIDDLE PHAL.	-	-	25	-	25	-	-	1	-	1			)					)9		9	-	-	-	-	-
TERM. PHAL.	-	-	22	-	22	-	-	5	-	5			)					)			-	-	-	-	-
MIN. NO. ANIMALS					192					13				Max.	37				Max.	27					5
														Min.	30				Min.	13					

OX	HORSE	SHEEP	PIG	RED DEER	
1657 Bones	154 Bones	337 Bones	173 Bones	22 Bones	Total =
71.0%	6.6%	14.4%	6.9%	1.1%	2,343 Bones

* No distinction between metacarpal and metatarsal

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APPENDIX 'C'

CATCOTE. TABLE SHOWING TOTALS OF ALL BONE FRAGMENTS IDENTIFIED FROM CATCOTE. DISTAL AND PROXIMAL FRAGMENTS ARE INCLUDED.

BONE	SPECIES						
	OX	HORSE	SHEEP	PIG	DOG	FOX	RED DEER
Skull	2	1	3	-	-	-	-
Maxilla	4	-	15	11	2	-	-
Mandible	22	-	40	17	2	1	-
Atlas	1	-	2	-	-	-	-
Axis	6	1	4	-	-	-	-
Scapula	19	3	25	4	1	-	-
Humerus	34	1	36	?3	-	-	-
Ulna	10	-	15	-	-	-	-
Radius	21	4	27	-	-	-	-
Metacarpal	24	1	16	8*	-	-	1*
Os Coxae	6	-	?12	2	-	-	-
Femur	11	-	13	1	-	-	-
Tibia	23	3	33	1	-	-	-
Fibula	-	-	-	-	-	-	-
Astragalus	18	3	13	-	-	-	-
Calcaneum	16	2	17	-	-	-	-
Metatarsal	23	7	24	-	-	-	-
Proximal phalange	36	5	-	-	-	-	-
Middle phalange	22	3	-	-	-	-	-
Terminal phalange	8	2	-	-	-	-	-
Horn Cores	13	-	5	-	-	-	-
Other Vertebrae	?21	3	?49	-	-	-	-
	340	39	349	47	5	1	1 - Total = 782

* Metapodials not assigned to hind or front limb

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APPENDIX 'D'

TABLE SHOWING THE TOTALS OF ENTIRE BONES OR FRAGMENTS DISPLAYING DISTAL ARTICULATORY SURFACE, RECOVERED FROM CATCOTE

	SPECIES														
	OX			HORSE			SHEEP			PIG			RED DEER		
	1966		Total	1966		Total	1966		Total	1966		Total	1966		Total
BONE	L.	R.		L.	R.		L.	R.		L.	R.		L.	R.	
SKULL	-	-	2	-	-	1	-	-	3	-	-	-	-	-	-
MAXILLA	2	2	4	-	-	-	9	6	15	7	4	11	-	-	-
MANDIBLE	13	9	22	-	-	-	21	19	40	8	9	17	-	-	-
ATLAS	-	-	1	-	-	-	-	-	2	-	-	-	-	-	-
AXIS	-	-	6	-	-	-	-	-	4	-	-	-	-	-	-
SCAPULA	9	10	19	1	2	3	16	9	25	3	1	4	-	-	-
HUMERUS	7	13	20	1	-	1	5	11	16	1	1	2	-	-	-
ULNA	2	2	4	-	-	-	11	4	15	-	-	-	-	-	-
RADIUS	2	2	4	1	-	1	1	2	3	-	-	-	-	-	-
METACARPAL	4	6	10	-	-	-	2 3	2	7	-	-	-	-	-	-
OS. COXAE	4	2	6	-	-	-	7	5	12	1	1	2	-	-	-
FEMUR	1	2	3	-	-	-	1	1	2	-	1	1	-	-	-
TIBIA	8	4	12	1	1	2	7	5	12	1	-	1	-	-	-
FIBULA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASTRAGALUS	10	8	18	2	1	3	6	6	12	-	-	-	-	-	-
CALCANEUM	8	8	16	1	1	2	11	6	17	-	-	-	-	-	-
METATARSAL	2	3	5	1	3	4	3 4	3	10	-	-	8	-	-	1
PROX. PHAL.	36	-	36	-	-	5	-	-	-	-	-	-	-	-	-
MIDDLE PHAL.	22	-	22	-	-	3	-	-	-	-	-	-	-	-	-
TERM. PHAL.	8	-	8	-	-	2	-	-	-	-	-	-	-	-	-
HORN CORES	4 5	4	13	-	-	-	2	4	6	-	-	-	-	-	-
MIN. NO. ANIMALS		13	9		2			≥21	10		≥9			1	
		231			28			201			46			1	Total = 507
		45.6%			5.5%			39.6%			9.1%			0.2%	

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8. APPENDIX 'E'

DESCRIPTION OF DENTITION OF SPECIMENS OF CHILLINGHAM CATTLE

FOUND IN THE BRITISH MUSEUM (NATURAL HISTORY)

Reference No.	Left Mandible	Right Mandible
1953 L/4	22-3 P.3 (emerging) P2 d.m.3,2,1	Same as left
	4 P.3 (emerging) P2,1 d.m.3,2 (socket for p.m.1)	Same as left
	*- 5 P3,2,1 P.M.4,3,2	Same as left
	*- 6 P.3,2,1 P.M.4,3 (broken tooth in socket ? P.M.2)	Same as left
	- 7 P.3.2.1 P.M.4.3 (socket for P.M.2)	Same as left but socket is tiny may be d.m.1 (decidous)
	- 8 P.3,2,1 P.M.4,3, no socket present.	Same as left
	- 9 Mandibles absent from this specimen.	
	-10 - Teeth lacking	
	No socket for P.M.2	Socket apparently for P.M.2 present.
*1890. 3.12.1. male	M.3,2,1 P.M.4,3,2.	Same as left
1890 3.10.2. female.	Jaw severely deformed.	
	Dentition apparently	Same as left
	M.2 (damaged) M.1, P.M.3,2.	

* Specimen apparently bears permanent premolar P.M.2

9. APPENDIX 'F'

STATISTICAL TESTS APPLIED TO CATTLE METAPODIALS RECOVERED FROM CORSTOPITUM

(a) Chi Square Tests on Metatarsal Distal Widths

Meek and Gray results show 61 left and 66 right for which a distal measurement was given.

1966 results show 13 left and 10 right for which distal measurement is available.

1. Left and right metatarsals in Meek & Gray Report were numbered from 1-61 and 1-66 respectively.
2. 13 left and 10 right were picked out at random. (This was repeated for a second test).
3. The distal width of 23 thus selected was noted.
4. They were arranged in 2 intervals.
5. Meek & Gray data now treated as "expected" "E" distribution. 1966 material treated as "observed" "O"
6. Frequencies were -

	44-45	46-47	48-49	50-51	52-53	54-55	56-57
1st sample	4	6	2	8	0	1	0
2nd sample	6	3	4	4	1	2	1
1966 specimens	4	6	5	2	2	0	1

	58-59	60-61	62-63	64-65	66-67
1st sample	1	0	0	1	0
2nd sample	0	2	0	0	0
1966 specimens	0	1	0	1	1

$$\chi^2 = \sum\left[\frac{(O-E)^2}{E}\right]$$

1st Test. $\chi^2_{(11)} = \frac{(4-4)^2}{4} + \frac{(6-6)^2}{6} + \frac{(5-2)^2}{2} + \frac{(2-8)^2}{8} + \frac{(2-0)^2}{0}$

$$+\frac{(0-1)^2}{1} + \frac{(1-0)^2}{0} + \frac{(0-1)^2}{1} + \frac{(1-0)^2}{0} + \frac{(0-0)^2}{0} + \frac{(1-1)^2}{1} + \frac{(1-0)^2}{0}$$

$\therefore \chi^2_{(11)} = 19.0$

Probability > 0.05

2nd test.

$$\chi^2_{(11)} = \frac{(4-6)^2}{6} + \frac{(6-3)^2}{3} + \frac{(5-4)^2}{4} + \frac{(2-4)^2}{4} + \frac{(2-1)^2}{1} + \frac{(0-2)^2}{2} + \frac{(1-1)^2}{1}$$
$$+ \frac{(0-0)^2}{0} + \frac{(1-2)^2}{2} + \frac{(0-0)^2}{0} + \frac{(1-0)^2}{0} + \frac{(1-0)^2}{0}$$

$$= \frac{4}{6} + \frac{9}{3} + \frac{1}{4} + \frac{4}{4} + \frac{1}{1} + \frac{4}{2} + \frac{0}{0} + 0 + \frac{1}{2} + 0 + 1 + 1$$

$\chi^2_{(11)} = 10.41$

Probability between 0.50 and 0.30. Approaching 0·50.

The tests were repeated arranging the bones in 4 m.m. intervals.

Frequencies -

	45-47	48-51	52-55	56-59	60-63	64-67
1st sample	10	10	1	1	0	1
2nd sample	9	8	3	1	2	0
1966 specimens	10	7	2	1	1	2

1st test

$$\chi^2_{(5)} = \frac{(10-10)^2}{10} + \frac{(7-10)^2}{10} + \frac{(2-1)^2}{1} + \frac{(1-1)^2}{1} + \frac{(1-0)^2}{0} + \frac{(2-1)^2}{1}$$

$$= 0 + \frac{9}{10} + 1 + 0 + 1 + 1$$

$\chi^2_{(5)} = 3.9$ Probability $>$ 0.50

2nd test

$$\chi^2_{(5)} = \frac{(10-9)^2}{9} + \frac{(7-8)^2}{8} + \frac{(2-3)^2}{3} + \frac{(1-1)^2}{1} + \frac{(1-2)^2}{2} + \frac{(2-0)^2}{0}$$

$$= \frac{1}{9} + \frac{1}{8} + \frac{1}{3} + \frac{0}{0} + \frac{1}{2} + 4$$

$$= 0.11 + 0.125 + 0.33 + 0.5 + 4$$

$\chi^2_{(5)} = 6.065$ Probability 0.30

Chi Square Tests on Metacarpal distal widths

A similar sampling technique was adopted for the metacarpals as for the metatarsals. Eleven left and five right were selected at random (repeated for 2nd test). ('selected' not random! 'Taken')

Frequencies were grouped in 2 m.m. intervals.

	45-46	47-48	49-50	51-52	53-54	55-56	57-58	59-60
1st sample	0	0	4	3	3	0	1	3
2nd sample	0	1	4	4	4	0	0	0
1966 material	1	0	7	5	0	1	1	0

	61-62	63-64	65-66	67-68	69-70	71-72	73-74
1st sample	0	1	0	0	0	1	0
2nd sample	0	1	1	0	0	0	1
1966 material	0	0	0	0	1	0	0

1st Test

$$\chi^2_{(14)} = \frac{(1-0)^2}{0} + \frac{(0-0)^2}{0} + \frac{(7-4)^2}{4} + \frac{(5-3)^2}{3} + \frac{(0-3)^2}{3} + \frac{(1-0)^2}{0} + \frac{(1-1)^2}{1} + \frac{(0-3)^2}{3}$$
$$+ \frac{(0-0)^2}{0} + \frac{(0-1)^2}{1} + \frac{(0-0)^2}{0} + \frac{(0-0)^2}{0} + \frac{(1-0)^2}{0} + \frac{(0-1)^2}{1} + \frac{(1-0)^2}{0}$$

$$= 1 + 0 + \frac{9}{4} + \frac{4}{3} + \frac{9}{3} + 1 + 0 + \frac{9}{3} + 0 + 1 + 0 + 0 + 1 + 1 + 1$$

$\chi^2_{(14)} = 15.58$. Probability between 0.30 and 0.50.

2nd Test

$$\chi^2_{(14)} = \frac{(1-0)^2}{0} + \frac{(0-1)^2}{1} + \frac{(7-4)^2}{4} + \frac{(5-4)^2}{4} + \frac{(0-4)^2}{4} + \frac{(1-0)^2}{0} + \frac{(1-0)^2}{0} + \frac{(0-0)^2}{0}$$
$$+ \frac{(0-0)^2}{0} + \frac{(0-1)^2}{1} + \frac{(0-1)^2}{1} + \frac{(0-0)^2}{0} + \frac{(1-0)^2}{0} + \frac{(0-0)^2}{0} + \frac{(0-1)^2}{1}$$

$$= 1 + 1 + \frac{9}{4} + \frac{1}{4} + \frac{16}{4} + 1 + 1 + 0 + 0 + 1 + 1 + 0 + 1 + 0 + 1$$

$\chi^2_{(14)} = 14.50$. Probability between 0.50 and 0.30.

The tests were repeated arranging the bones in 4 m.m. intervals.

Frequencies -

	45-48	49-52	53-56	57-60	61-64	65-68	69-72	73-76
1st sample	0	7	3	4	1	0	1	0
2nd sample	1	8	4	0	1	1	0	1
1966 material	1	12	1	1	0	0	1	0

1st Test

$$\chi^2_{(6)} = \frac{(1-0)^2}{0} + \frac{(12-7)^2}{7} + \frac{(1-3)^2}{3} + \frac{(1-4)^2}{4} + \frac{(0-1)^2}{1} + \frac{(0-0)^2}{0} + \frac{(1-1)^2}{1}$$

$$= 1 + \frac{25}{7} + \frac{4}{3} + \frac{9}{4} + 1 + 0 + 0$$

$\chi^2_{(6)}$ = 10.15. Probability between 0.2 and 0.1.

2nd Test. N.B. extra degree of freedom necessary.

$$\chi^2_{(7)} = \frac{(1-1)^2}{1} + \frac{(12-8)^2}{8} + \frac{(1-4)^2}{4} + \frac{(1-0)^2}{0} + \frac{(0-1)^2}{1} + \frac{(0-1)^2}{1} + \frac{(1-0)^2}{0} + \frac{(0-1)^2}{1}$$

$$= 1 + \frac{16}{8} + \frac{9}{4} + 1 + 1 + 1 + 1 + 1$$

$\chi^2_{(7)}$ = 8.25. Probability between 0.2 and 0.1.

(b) "Students 't' Test for establishing the significance between Means for small samples

Metatarsals

1910 $\frac{\Sigma x}{N} = 5.03.$ $\sigma_1 = 0.529$ $N_1 = 127$

1966 $\frac{\Sigma x}{N} = 5.02$ $\sigma_2 = 0.575$ $N_2 = 23$

$$\sigma_D = \sqrt{\sigma_{M_1}^2 + \sigma_{M_2}^2}$$

Where $\sigma_{M_1} = \frac{\sigma_1}{\sqrt{(N_1 - 1)}}$ and $\sigma_{M_2} = \frac{\sigma_2}{\sqrt{(N_2 - 1)}}$

$$\sigma_{M_1} = \frac{0.529}{\sqrt{126}} \quad \text{and} \quad \sigma_{M_2} = \frac{0.575}{\sqrt{22}}$$

$$\sigma_{M_1} = 0.047 \quad \text{and} \quad \sigma_{M_2} = 0.122$$

$$\sigma_D = \sqrt{0.047^2 + 0.122^2}$$

$$= \sqrt{0.0171}$$

$$= 0.131$$

Critical Ratio $CR = \frac{(M_1 - M_2)}{\sigma_D}$ where M = Mean

$$= \frac{5.03 - 5.02}{0.131} = \frac{0.01}{0.131}$$

$$= 0.076$$

Degrees of freedom $d.f. = (N_1 - 1) + (N_2 - 1)$

$$= 126 + 22$$

$$= 148$$

Distribution of 't' at probabilities of 0.05 and 0.01

for d.f. 120 are 1.98 and 2.617

d.f. ∞ are 1.96 and 2.576

Differences between means of the two samples is <u>not</u> significant.

"Students 't' Test" for establishing the significance between Means for small samples

Metacarpals

1910 $\frac{\Sigma x}{N} = 5.44$ $\sigma = 0.6$ $N_1 = 116$

1966 $\frac{\Sigma x}{N} = 5.21$ $\sigma = 0.539$ $N_2 = 16$

Standard error of difference between the means $= \sigma_D$

$$\sigma_D = \sqrt{\sigma^2_{M_1} + \sigma^2_{M_2}}$$

where $\sigma_{M_1} = \frac{\sigma_1}{\sqrt{(N_1 - 1)}}$ and $\sigma_{M_2} = \frac{\sigma_2}{\sqrt{(N_2 - 1)}}$

$\sigma_{M_1} = \frac{0.6}{\sqrt{115}}$ and $\sigma_{M_2} = \frac{0.539}{\sqrt{15}}$

$\sigma_{M_1} = 0.056$ and $\sigma_{M_2} = 0.139$

$\therefore \sigma_D = \sqrt{0.056^2 + 0.139^2}$

$= \sqrt{0.0225}$

$= 0.15$

Critical Ration C.R. $= \frac{(M_1 - M_2)}{\sigma_D}$ where M = Mean

$= \frac{5.44 - 5.21}{0.15}$

$= 1.533$

Degrees of freedom d.f. $= (N_1 - 1) + (N_2 - 1)$

$= 130$

Distribution of 't' at probabilities of 0.05 and 0.01

for d.f. = 120 are 1.98 and 2.617

d.f ∞ are 1.96 and 2.576

Difference between the means of the two samples is not significant

Cornu's Value $\frac{s.d}{e}$ where $e = \frac{\Sigma|x - \bar{x}|}{n}$

for metatarsals = 1.35
for metacarpals = 1.18

Value for normal distribution = 1.25 (Brooks and Caruthers 1953)

10. APPENDIX 'G'

STATISTICAL DATA REFERRING TO LONG BONES OF CATTLE AND SHEEP

(a) EXCAVATED AT CORSTOPITUM

Cattle

	$\sum x^2$	$\sum x$	N	$\frac{\sum x}{N}^2$	$\frac{\sum x}{N}$	s.d		s.d
1910 report	3249.16	639.2	127	25.58	5.03	$\sqrt{0.28}$	=	0.529
1966	587.08	115.4	23	25.53	5.02	$\sqrt{0.33}$	=	0.575
Combined	3836.24	754.6	150	25.57	5.03	$\sqrt{0.27}$	=	0.52
Metacarpals (distal width)								
1910 report	3473.29	631.5	116	29.95	5.44	$\sqrt{0.36}$	=	0.6
1966	438.82	83.4	16	27.43	5.21	$\sqrt{0.29}$	=	0.539
Combined	3913.11	714.9	132	29.64	5.42	$\sqrt{0.26}$	=	0.51
Tibia (distal width)								
1910 report	2254.72	417.2	78	28.91	5.35	$\sqrt{0.29}$	=	0.539
1966	221.42	42.0	8	27.68	5.25	$\sqrt{0.12}$	=	0.346
Combined	2476.14	459.2	86	28.79	5.34	$\sqrt{0.27}$	=	0.52
Radius (distal width)								
1910 report	2211.40	371.2	63	35.10	5.89	$\sqrt{0.41}$	=	0.64
1966	151.91	24.5	4	37.98	6.13	$\sqrt{0.4}$	=	0.633
Combined	2363.31	375.7	67	35.27	5.91	$\sqrt{0.34}$	=	0.583
Scapula								
(a) minimum width of neck								
1910 report	5395.78	1105.6	229	23.56	4.83	$\sqrt{0.23}$	=	0.48
1966	1539.10	338.8	75	20.52	4.52	$\sqrt{0.09}$	=	0.3
Combined	6934.88	1444.4	304	22.81	4.75	$\sqrt{0.25}$	=	0.5
(b) maximum diameter of glenoid								
1910 report	3597.56	702.0	138	26.07	5.09	$\sqrt{0.20}$	=	0.447
1966	1300.86	256.9	51	25.51	5.04	$\sqrt{0.14}$	=	0.374
Combined	4898.41	958.9	189	25.92	5.07	$\sqrt{0.18}$	≒	0.424

(b)

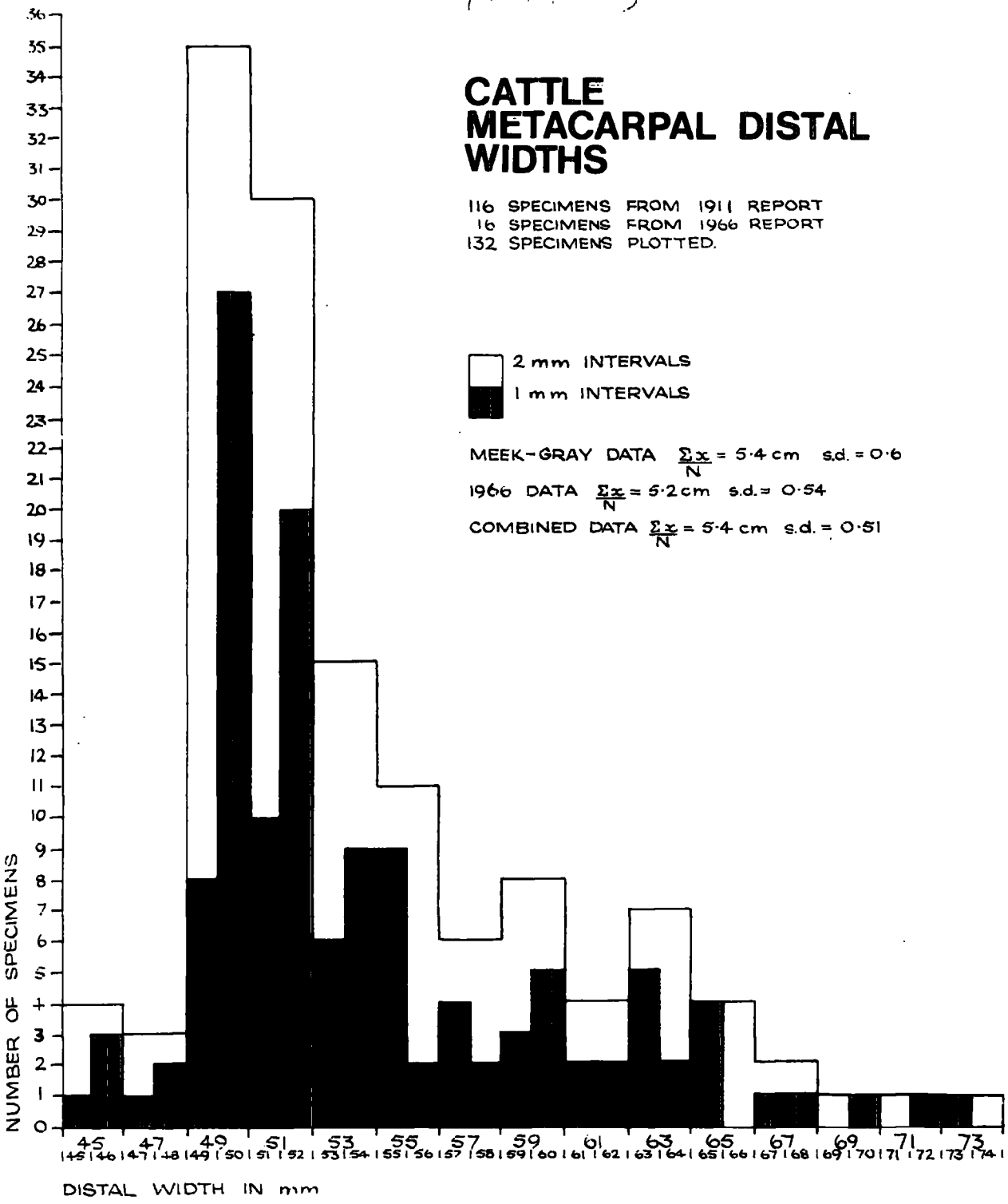
Sheep

Metatarsals	$\sum x^2$	$\sum x$	N	$\frac{\sum x^2}{N}$	$\frac{\sum x}{N}$	s.d		s.d
Meek & Gray	38.52	19.6	10	3.85	1.96	$\sqrt{0.01}$	=	0.1
G.W.I.Hodgson	51.09	24.7	12	4.26	2.06	$\sqrt{0.02}$	=	0.14
Combined	89.61	44.3	22	4.07	2.01	$\sqrt{0.03}$	=	0.17
Metacarpals								
Meek & Gray	66.65	30.5	14	4.76	2.18	$\sqrt{0.01}$	=	0.1
G.W.I.H.	37.13	16.1	7	5.30	2.30	$\sqrt{0.01}$	=	0.1
Combined	103.78	46.6	21	4.94	2.22	$\sqrt{0.01}$	=	0.1
Tibia								
Meek & Gray	39.20	23.4	14	2.80	1.67	$\sqrt{0.01}$	=	0.1
G.W.I.H.	59.98	26.8	12	5.00	2.23	$\sqrt{0.03}$	=	0.17
Combined	99.18	50.2	26	3.81	1.93	$\sqrt{0.09}$	=	0.3

Figure 1
CORSTOPITUM

CATTLE METACARPAL DISTAL WIDTHS

116 SPECIMENS FROM 1911 REPORT
16 SPECIMENS FROM 1966 REPORT
132 SPECIMENS PLOTTED.



MEEK-GRAY DATA $\frac{\Sigma x}{N}$ = 5·4 cm s.d. = 0·6

1966 DATA $\frac{\Sigma x}{N}$ = 5·2 cm s.d. = 0·54

COMBINED DATA $\frac{\Sigma x}{N}$ = 5·4 cm s.d. = 0·51

Figure 2
CORSTOPITUM

( )

CATTLE METATARSAL DISTAL WIDTHS

127 SPECIMENS FROM 1911 REPORT
23 SPECIMENS FROM 1966 REPORT
160 SPECIMENS PLOTTED

2mm INTERVALS
1mm INTERVALS

MEEK – GRAY DATA $\frac{\Sigma x}{N}$ = 5·0 cm s.d. = 0·529

1966 DATA $\frac{\Sigma x}{N}$ = 5·0 cm s.d. = 0·575

COMBINED DATA $\frac{\Sigma x}{N}$ = 5·0 cm s.d. = 0·52

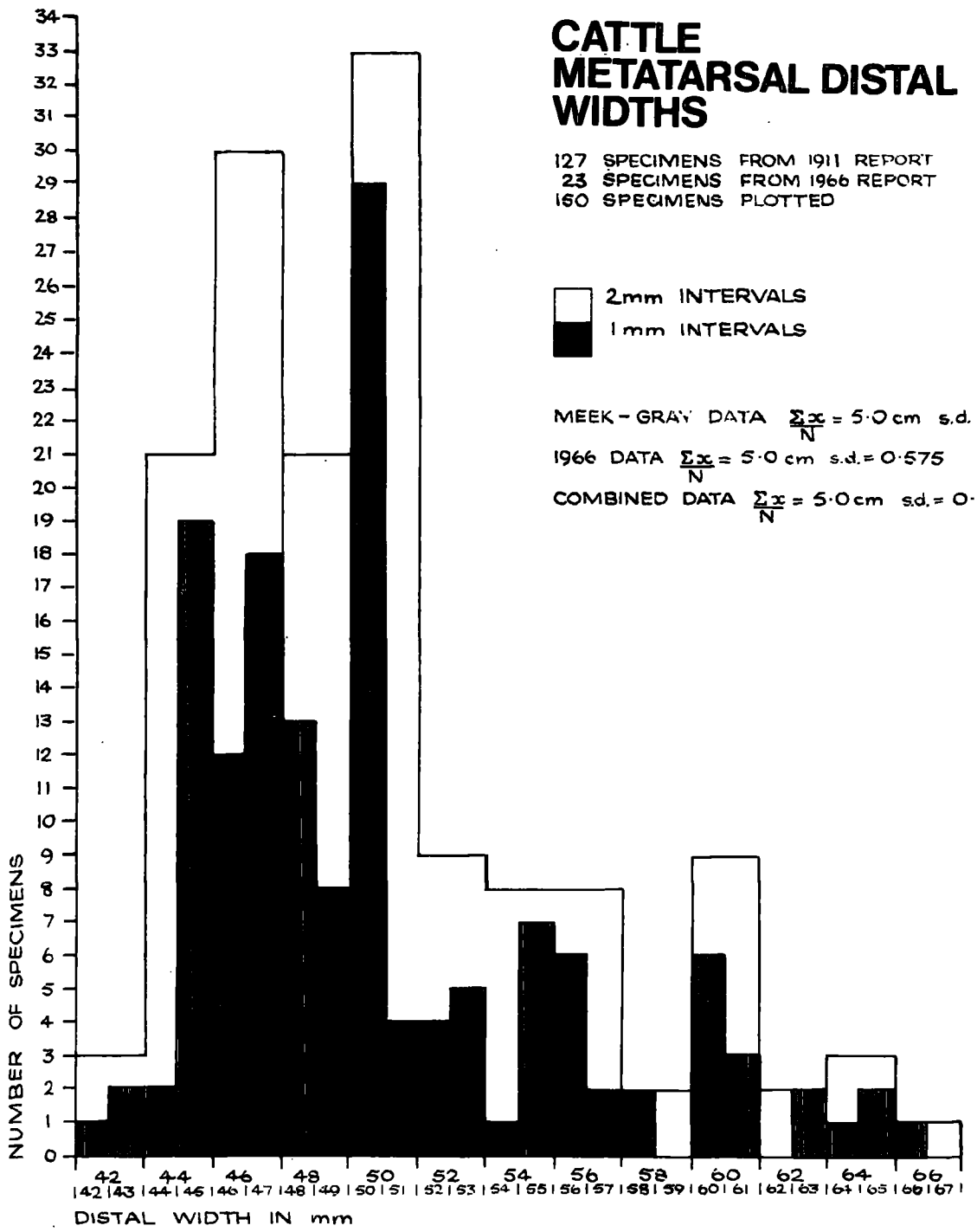
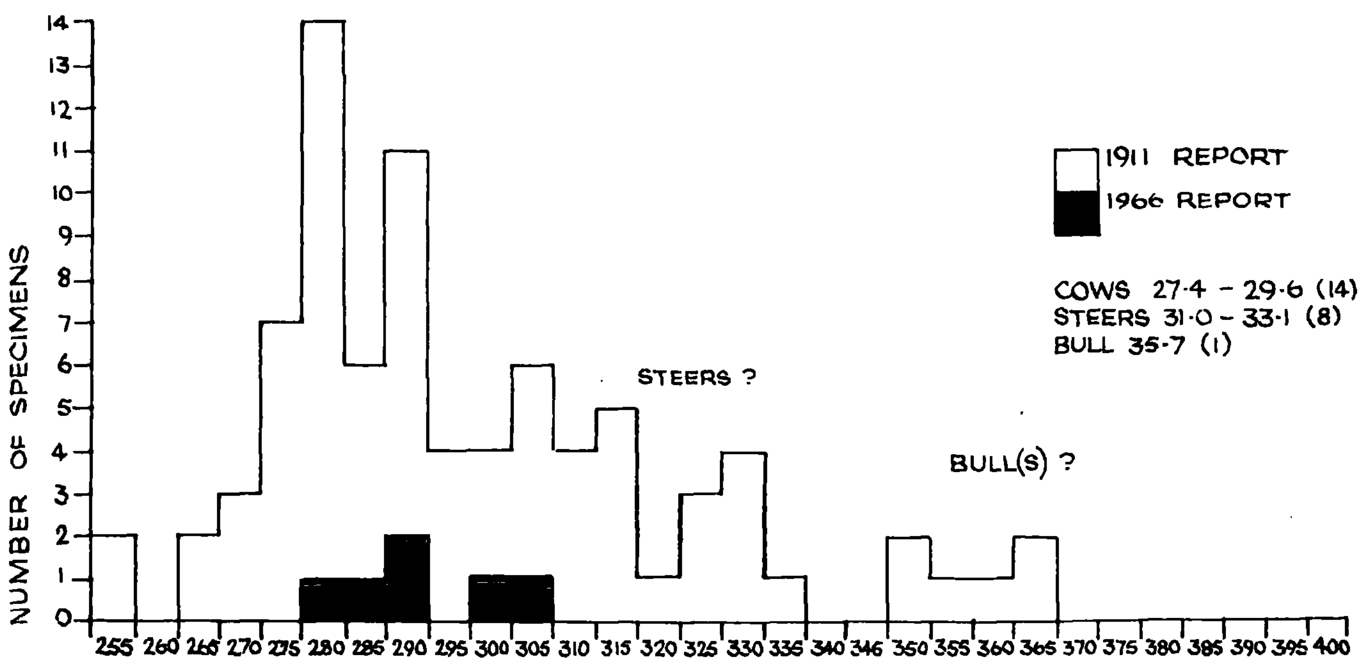


Figure 3
CORSTOPITUM

CATTLE METAPODIAL INDICES

METACARPAL $\frac{DB}{L} \times \frac{100}{1}$

INDEX ACCORDING TO HOWARD M.M. (1962)



$\frac{DB}{L} \times \frac{100}{1}$ in mm

This is an index (% B/L), not a measurement. Some whatever units used

Figure 4
CORSTOPITUM
(p. 16, Vol. 1)

CATTLE METAPODIAL INDICES

METATARSAL $\frac{DB}{L} \times \frac{100}{1}$

INDEX ACCORDING TO HOWARD M M (1962)

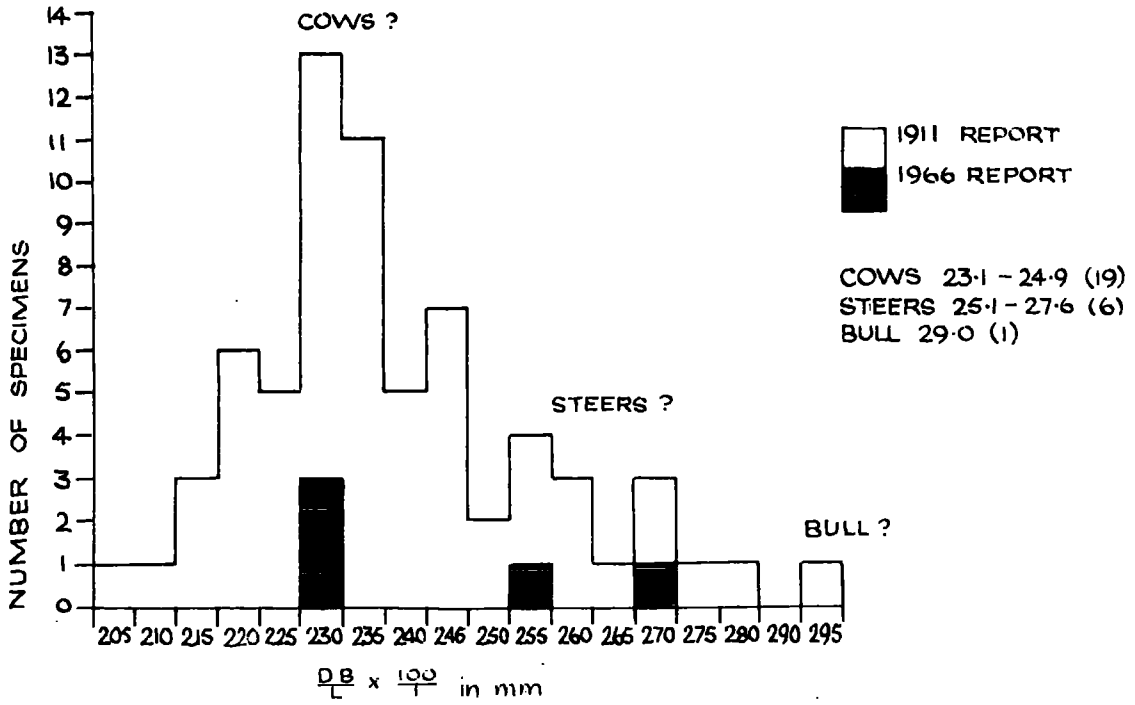


Figure 5

CATTLE METACARPAL LENGTH RANGES

ADAPTED FROM JEWELL (1962) EXTENDED AND REVISED

R V C – Material in Royal Veterinary College, breed and sex not known

Chillingham and Chartley material from British Museum

Figures for Alderney and Kerry are from Pitt Rivers (1888)

Number at side – number of specimens

Number inside – mean value

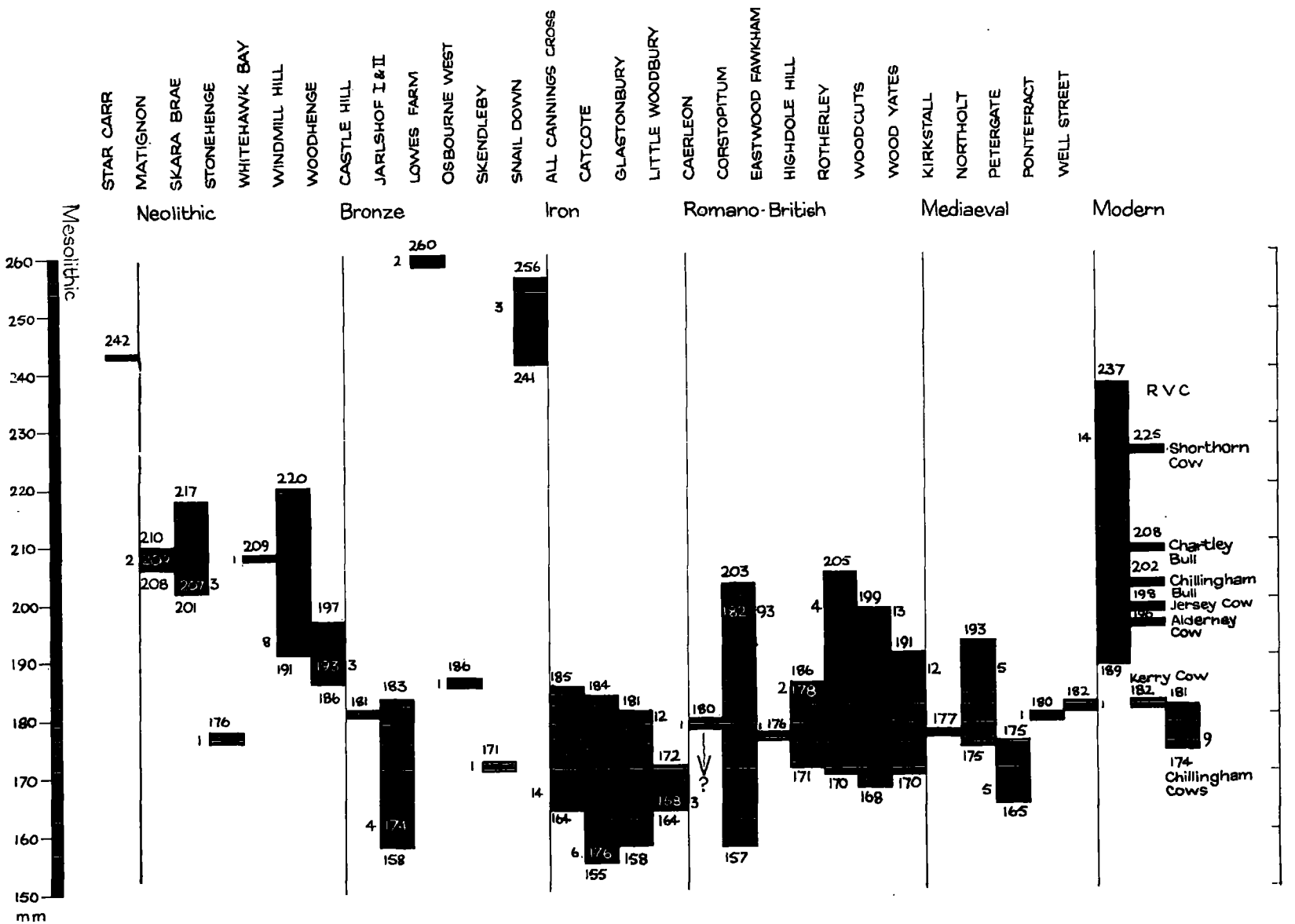


Figure 6

CATTLE DISTAL WIDTH RANGES OF METACARPALS

DETAILS AS IN FIG 5

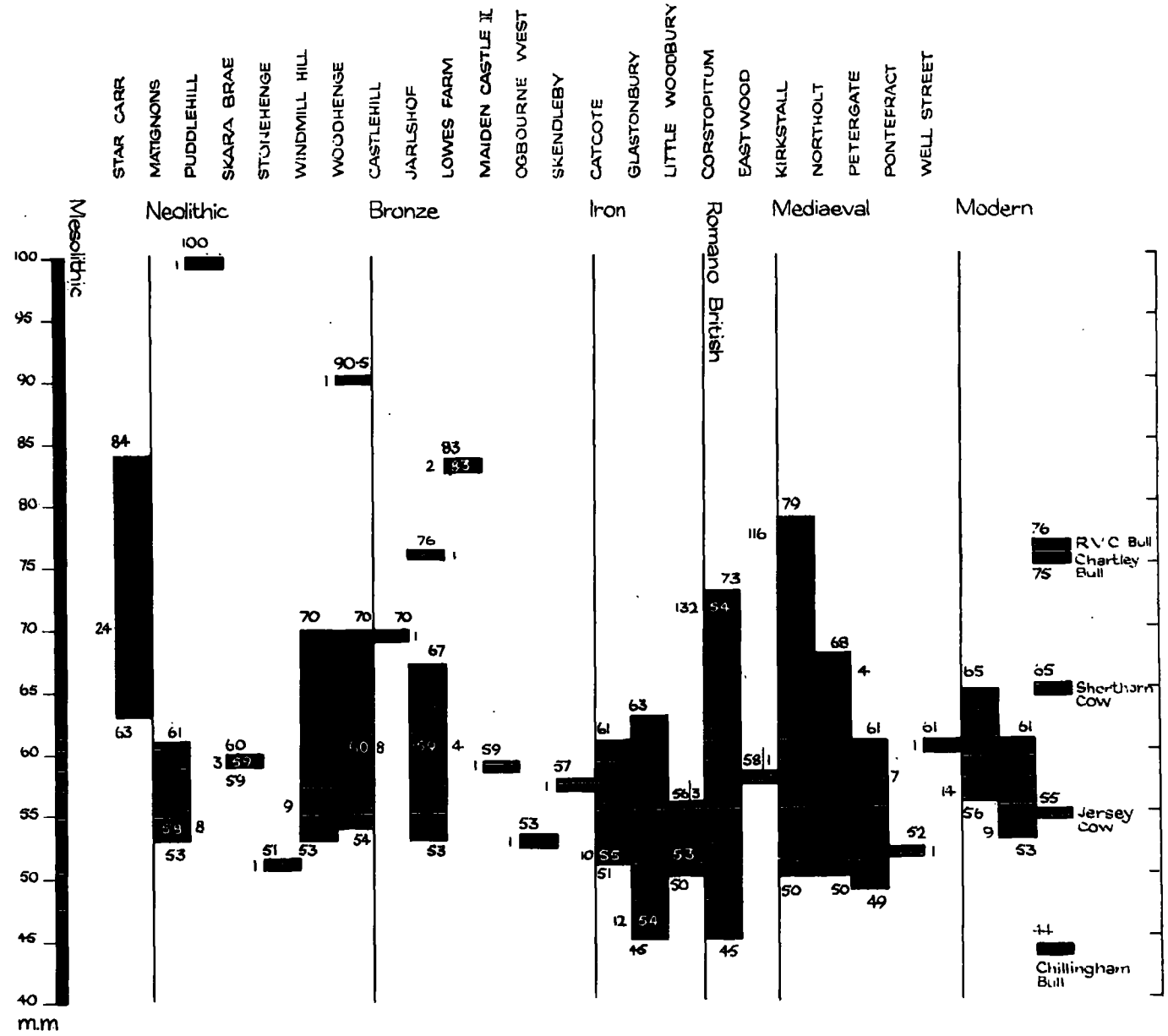


Figure 7

CATTLE HUMERUS WIDTH OF DISTAL ARTICULATION

DETAILS AS IN FIG 5

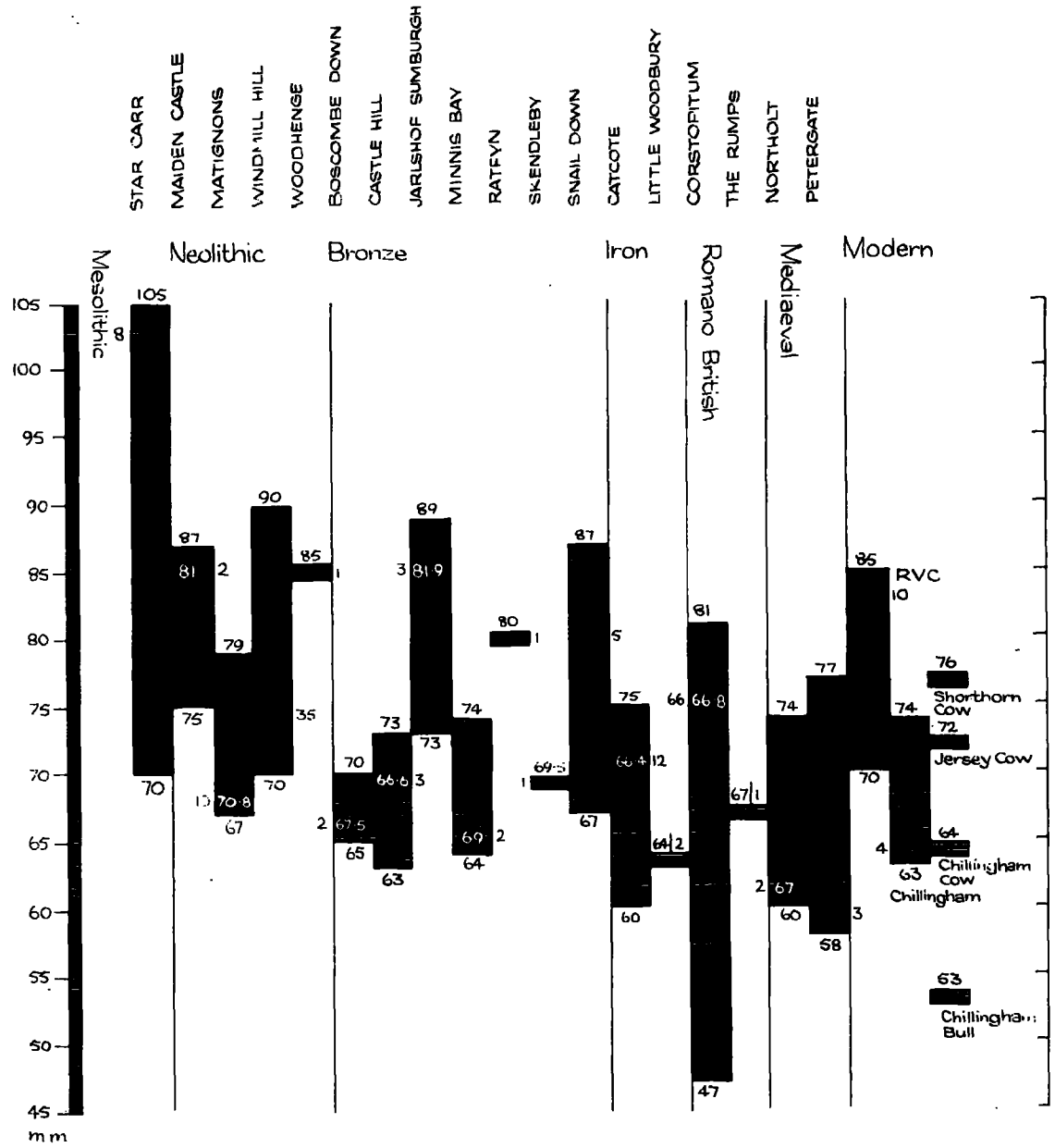


Figure 8

CATTLE ASTRAGALUS LENGTH RANGES

DETAILS AS IN FIGS

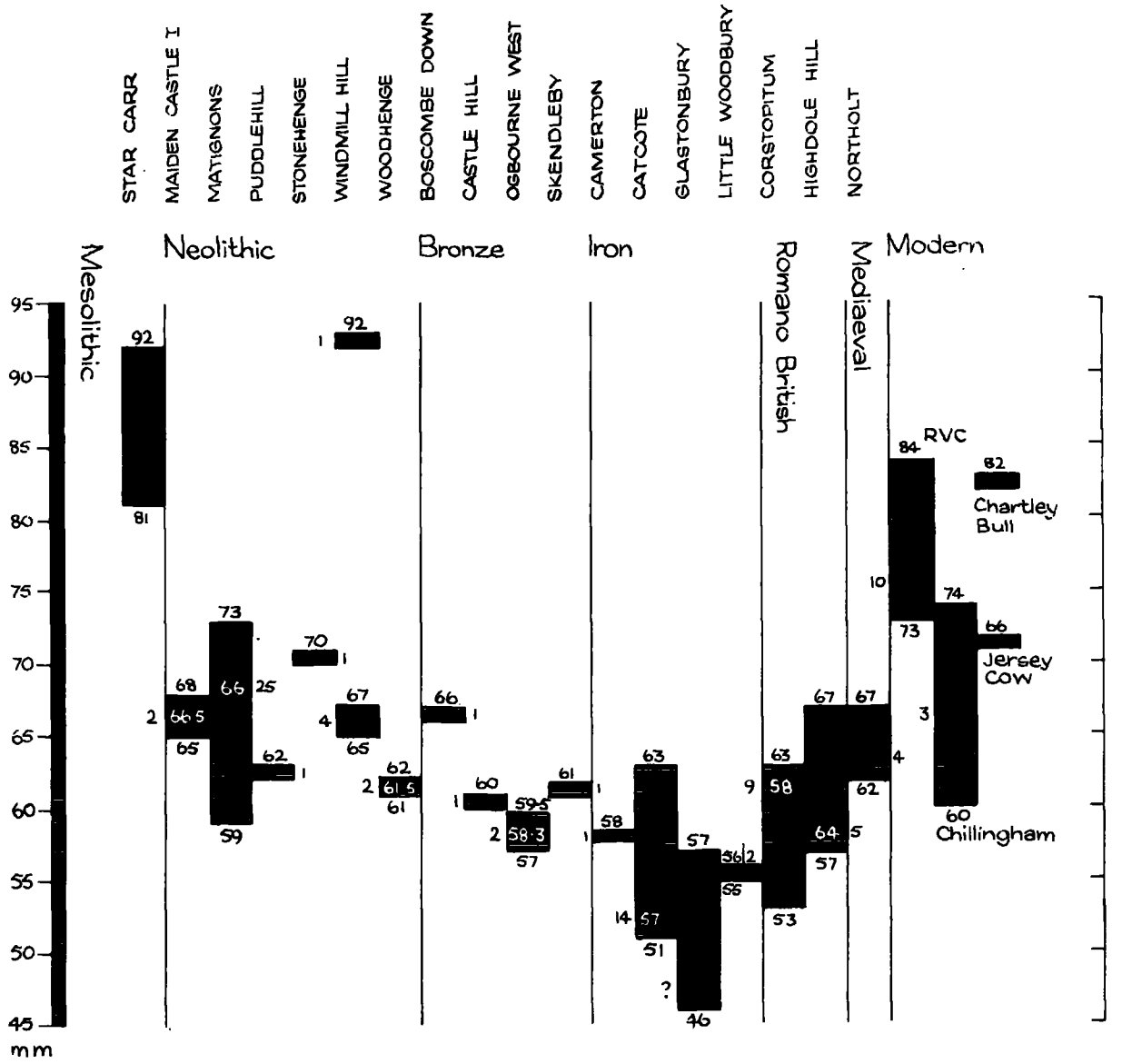


Figure 9

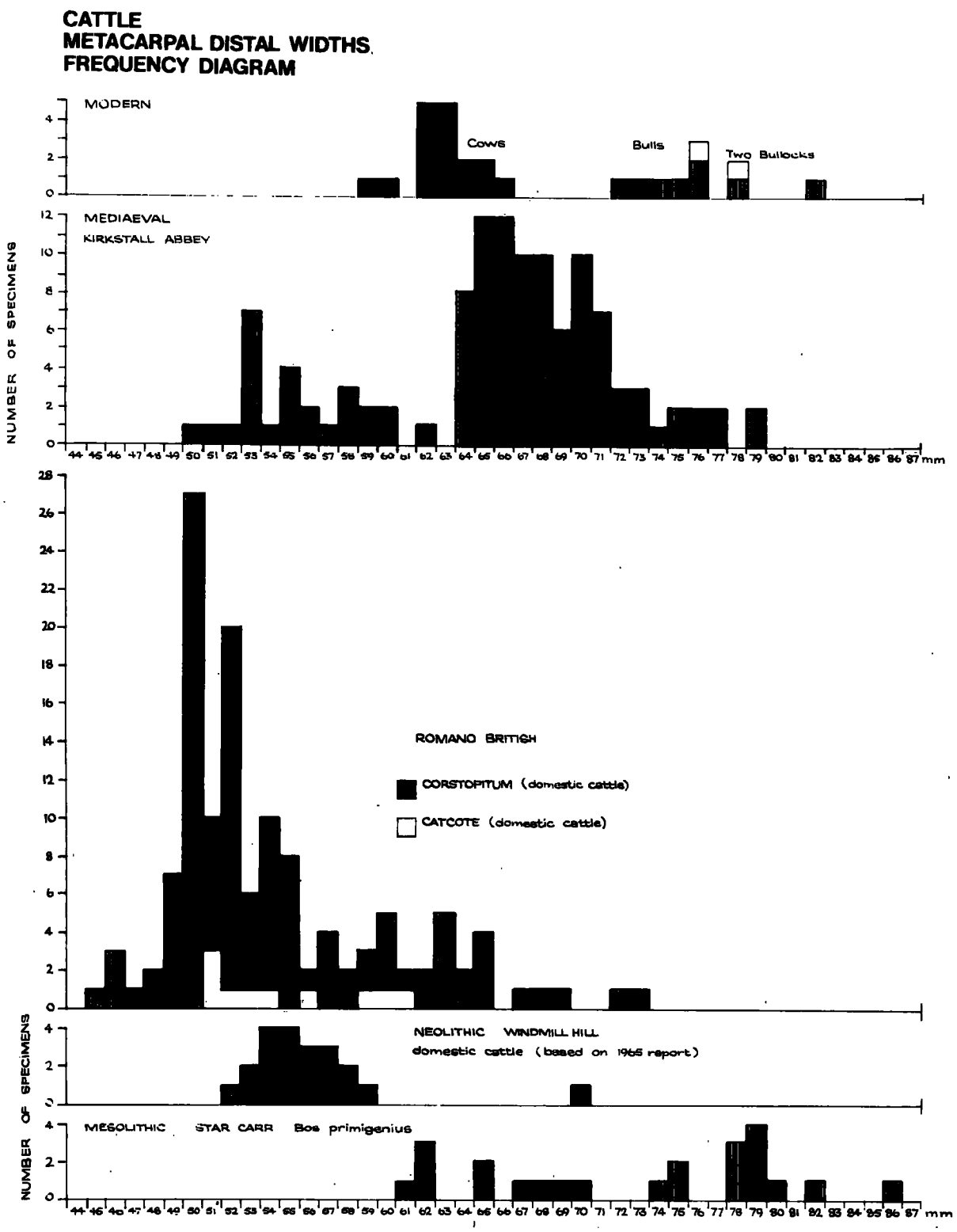

CATTLE
METACARPAL DISTAL WIDTHS.
FREQUENCY DIAGRAM
MODERN
Cows
Bulls
Two Bullocks
MEDIAEVAL
KIRKSTALL ABBEY
NUMBER OF SPECIMENS
mm
ROMANO BRITISH
CORSTOPITUM (domestic cattle)
CATCOTE (domestic cattle)
NEOLITHIC WINDMILL HILL
domestic cattle (based on 1965 report)
MESOLITHIC STAR CARR Bos primigenius

Figure 10a

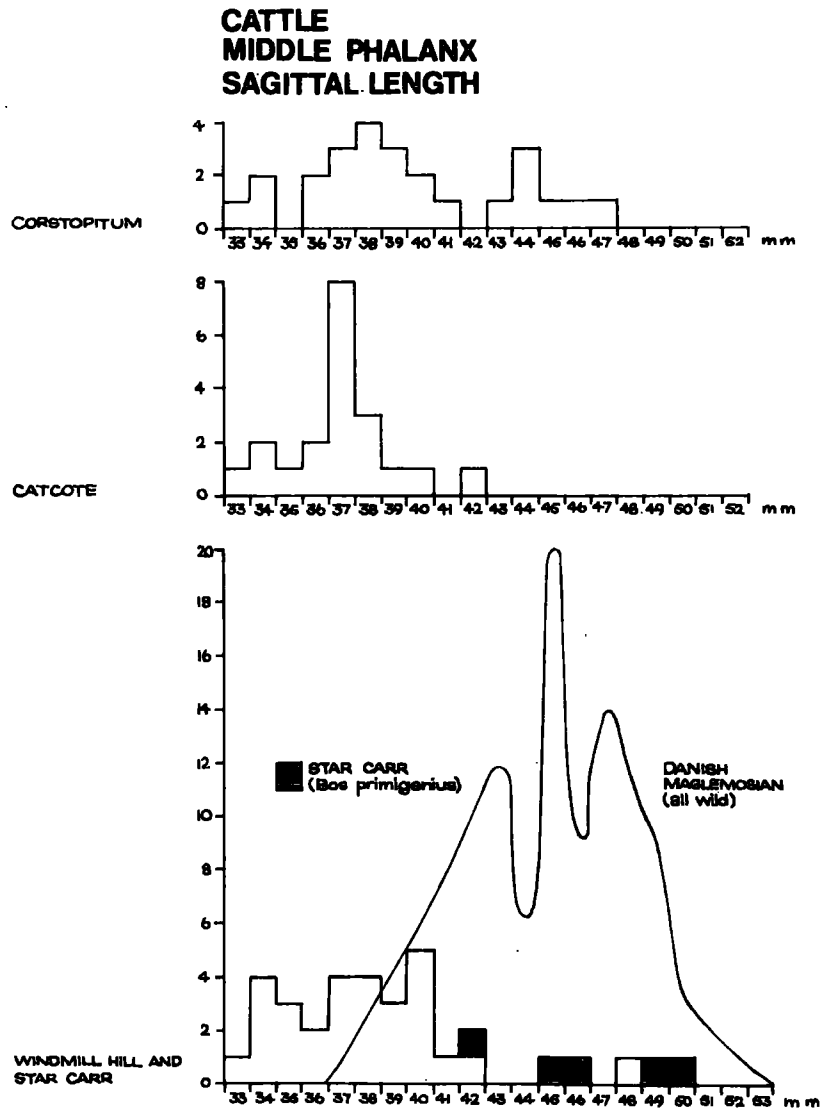
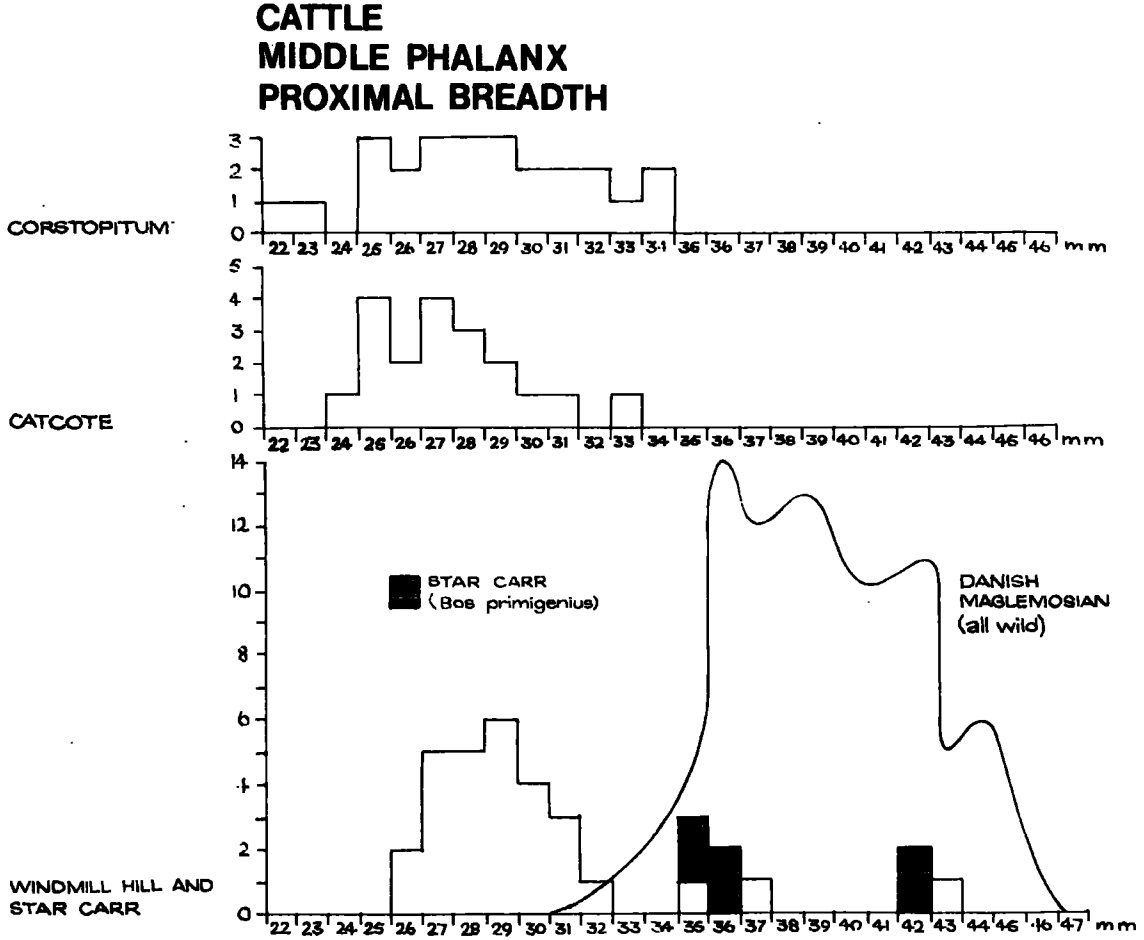
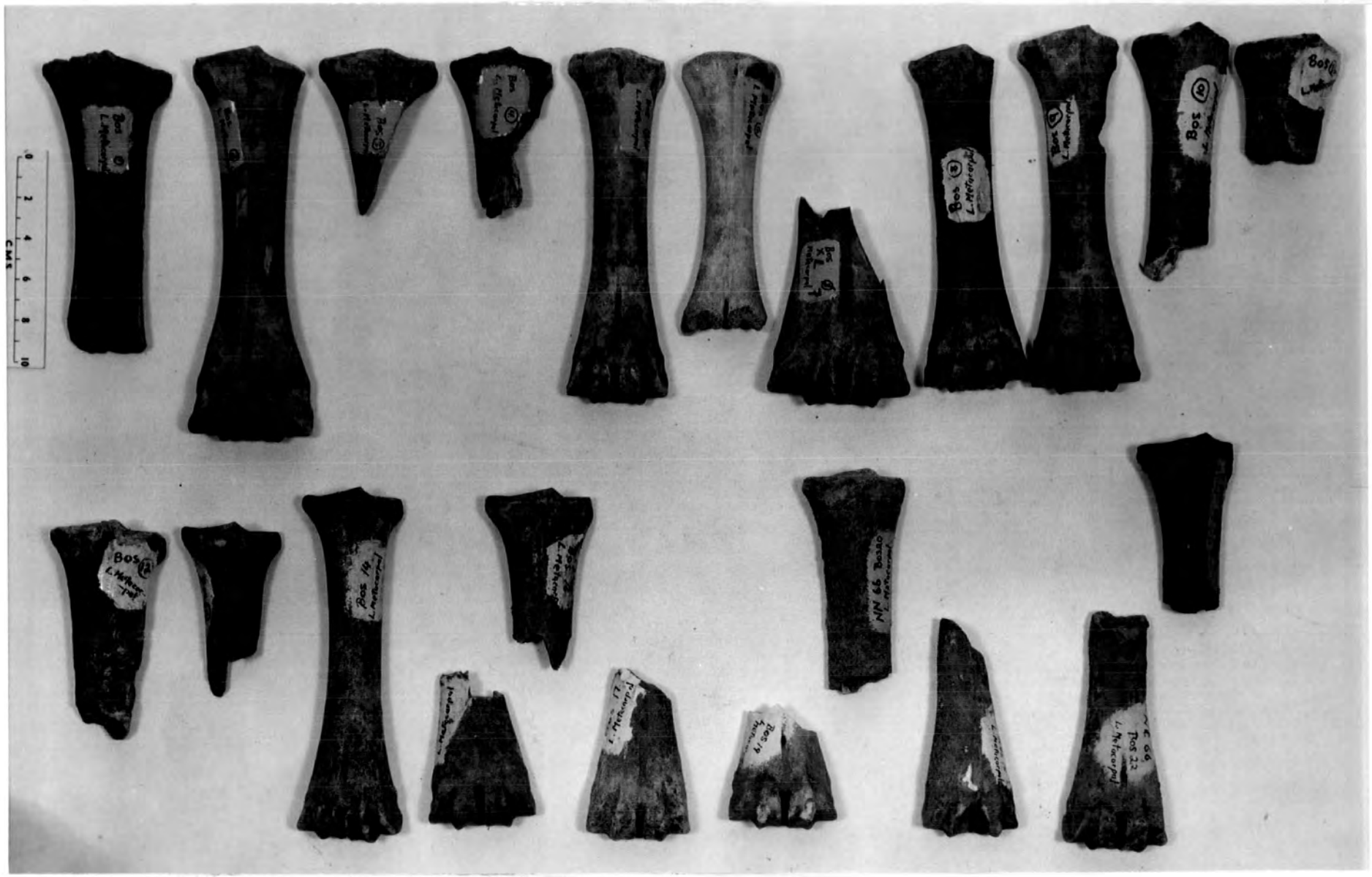


Figure 10b

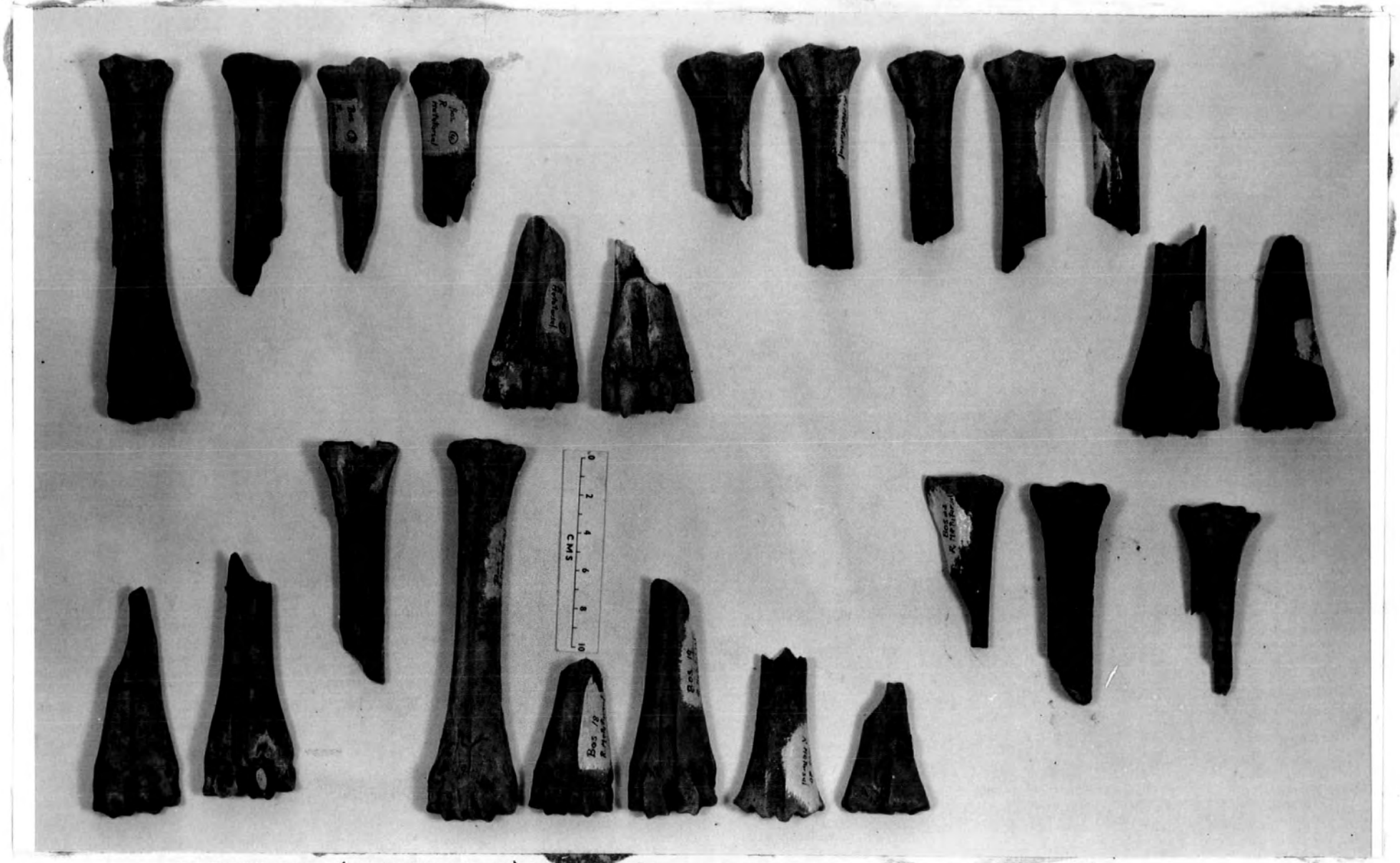


1. Bos taurus (Corbridge type) Right Scapulae 1-26.

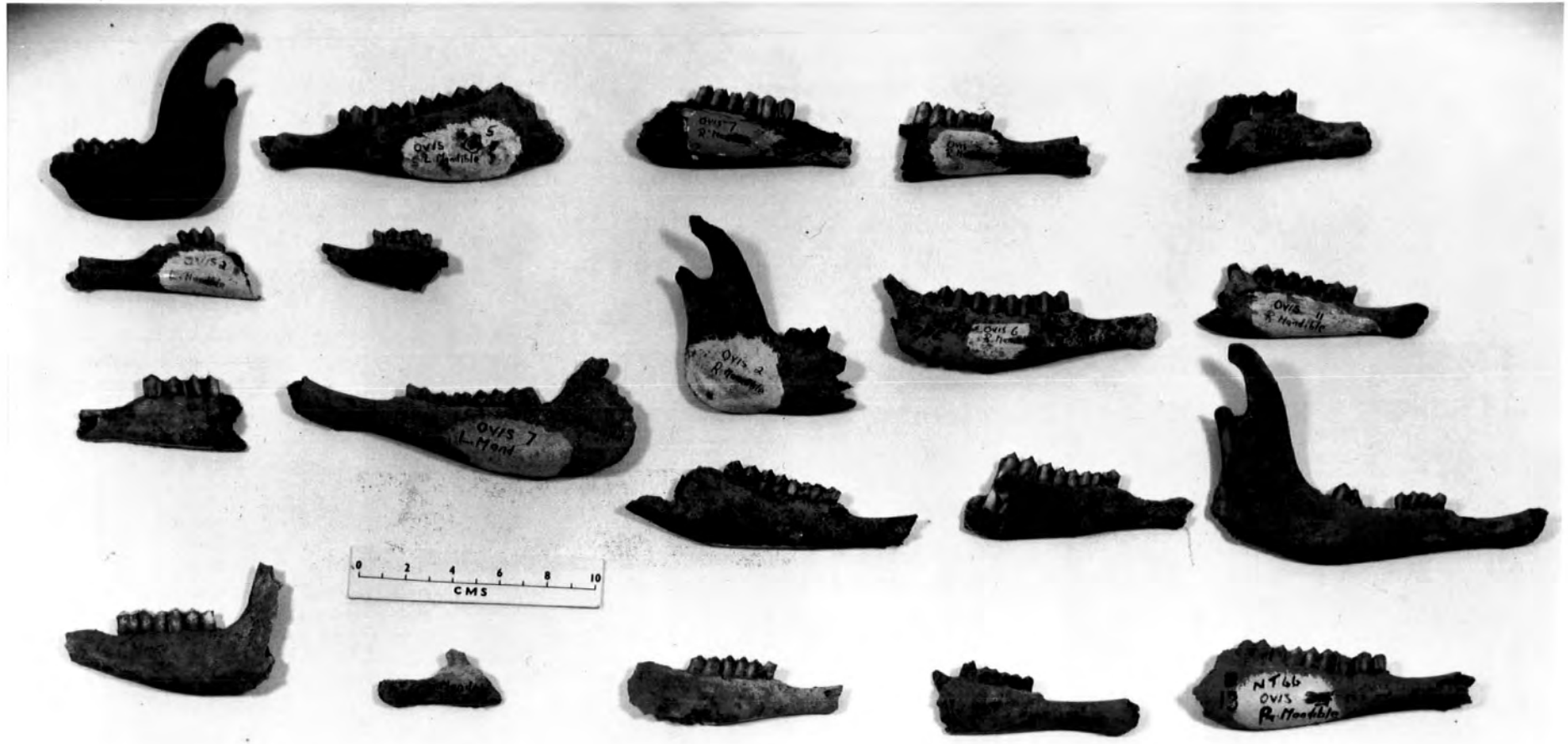
2. Bos taurus (Corbridge type) Right Scapulae 27-50.



3. Bos taurus (Corbridge type) Metacarpals.



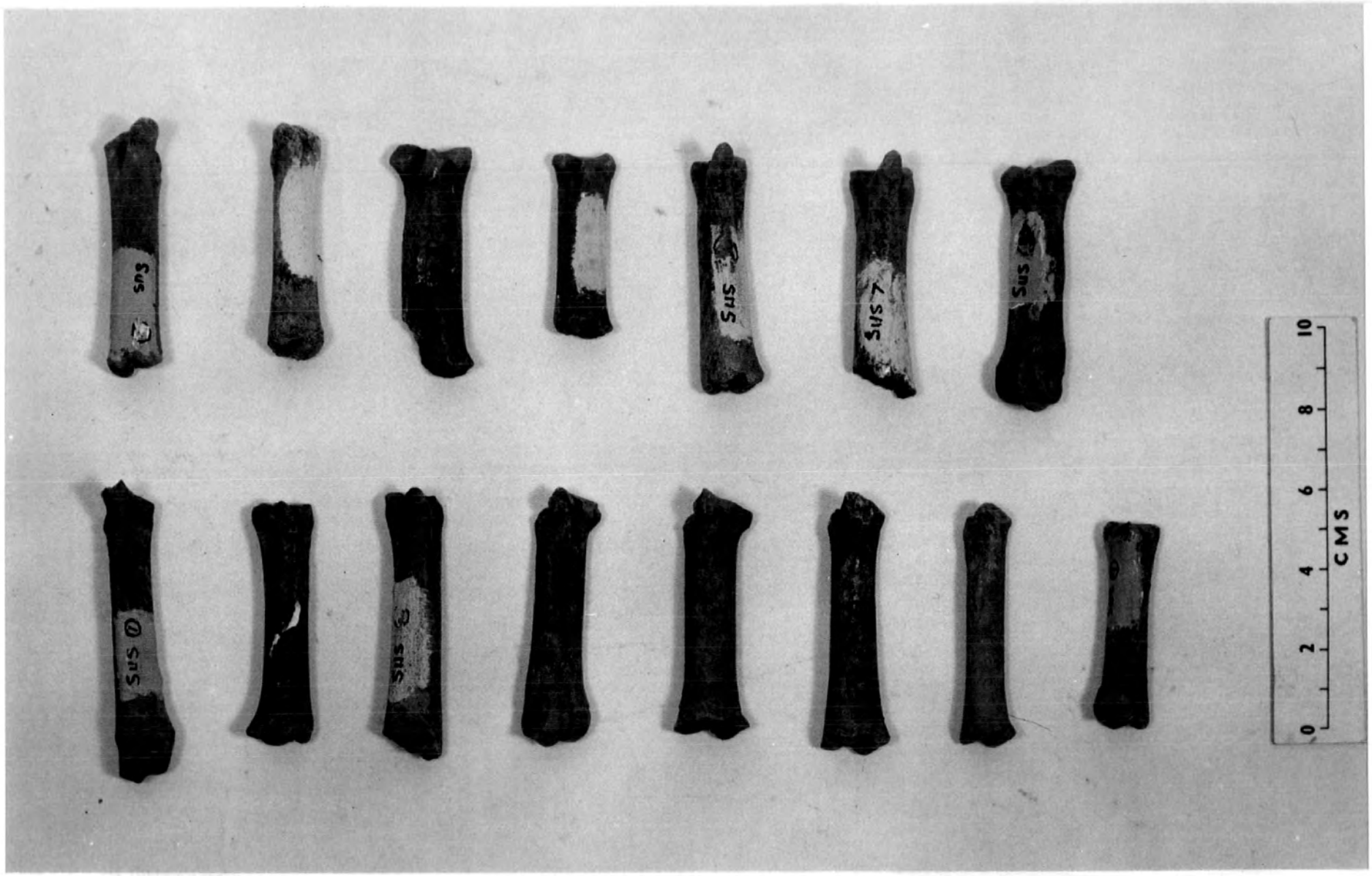
4. Bos taurus (Corbridge type) Metatarsals



5. Ovis aries (Corbridge type) Mandibles.

6. Ovis aries (Corbridge type) Radius bones.

7. Ovis aries (Corbridge type) Metatarsal bones.



8. Sus scrofa (Corbridge type) Metapodials.

9. Equus caballus (Corbridge type) Tibia bones.