

BIE Roman 04

43, 44, 53, 56, 57
54, 55

08 09

21, 22
41,
46.

CATTLE

Medieval

03 04
25 (one bone)

17, 47, 50

06 06 09 14

05
23, 24
20.13, 11
48
13hc R $\begin{array}{|c|} \hline \text{R} \\ \hline \text{L} \\ \hline \end{array}$

R pec

sk both

L 1 $\begin{array}{|c|} \hline \text{L} \\ \hline \text{Zyg} \\ \hline \text{fro, mal} \\ \hline \text{mal, occ} \\ \hline \end{array}$

hc L

max R

L 16 12

md R 12 15

L 1

Teeth Upr P (t)

 $\begin{array}{l} \text{g mature stage.} \\ M^1, 2 \text{ o t t t t t t t t t} \\ \text{R f Stage 1-5} \\ M^3 \text{ L t 5 x 6 9 5} \end{array}$

Lwr I (H)(H)(H)-t-t-toot

P f(t)t t t t
dec ps R J-stage 3EL $\begin{array}{|c|} \hline \text{back} \\ \hline \text{g g g g d} \\ \hline \end{array}$ M_{1, 2} g g g g d

R f 5 K 6 f 5

M₃ L f 5 K 6 f 5

R f n g n

sc. neck R f small k t

L t

P imm ch

R s bone

hu d gn

P und aged!

L s unfused t

d t r t

ra R s fusing t toulma

d t

P f large t

L s o

d t ch

ulna R ch large ch

L ch ch gn v large

L ch

R osch t i

pe pub t

il t f

L osch <7-10 mo.

pub o

p f o

R s

fe d

p ch

L s imm

d

Medieval

03 04

25 (one bone)

17, 47, 50

Medieval

03 04

23, 24

20.

Medieval

03 04

13, 11

48

13

Medieval

03 04

11

14

Medieval

03 04

(H) (H)

o < ? g

Medieval

03 04

(H) t

< (H)

Medieval

03 04

(H) o

Medieval

03 04

o ep

Medieval

03 04

t

Medieval

03 04

t

Medieval

03 04

o ep

Medieval

03 04

t

Medieval

03 04

? gn

Medieval

03 04

t

Medieval

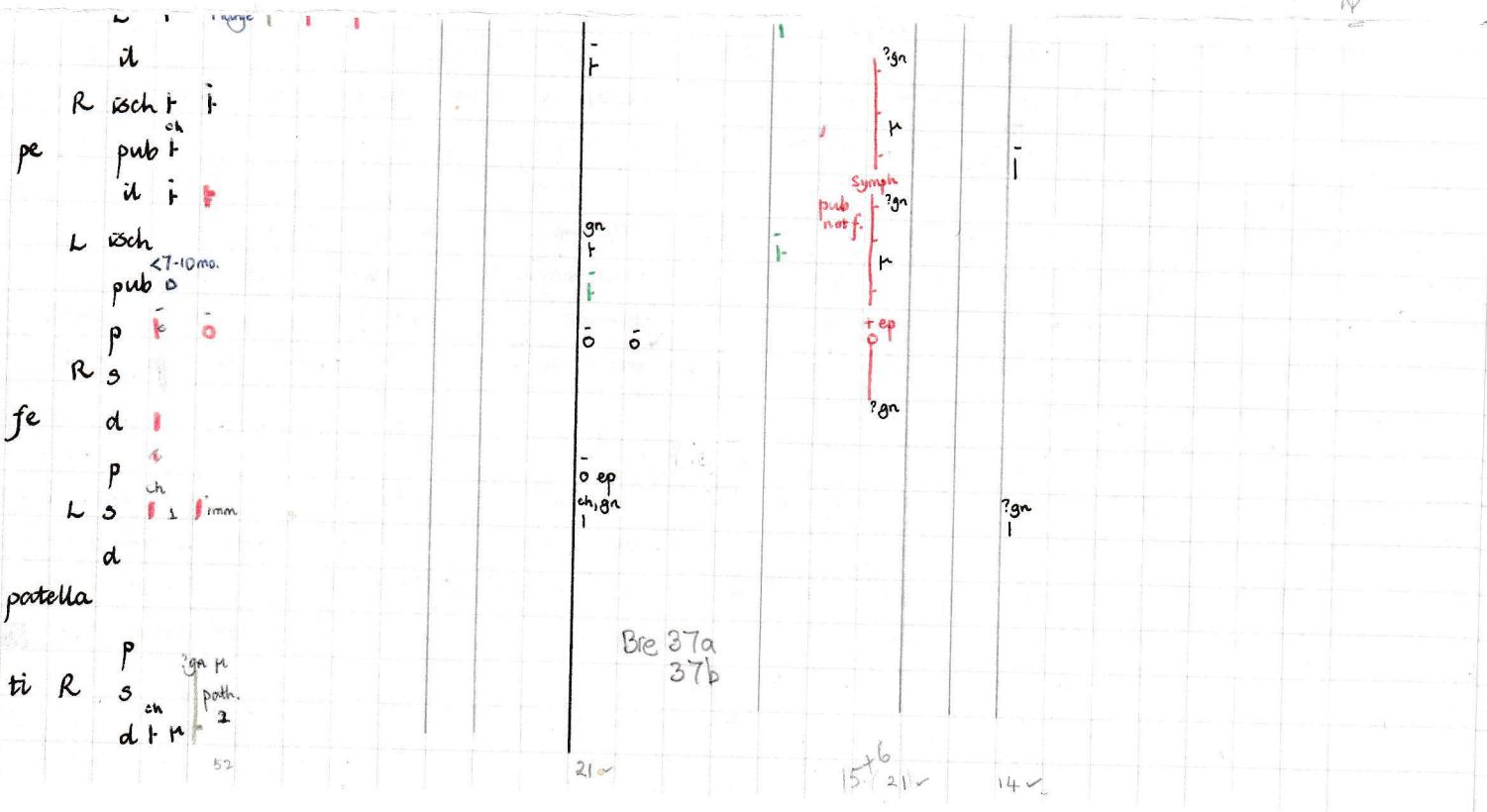
03 04

? gn

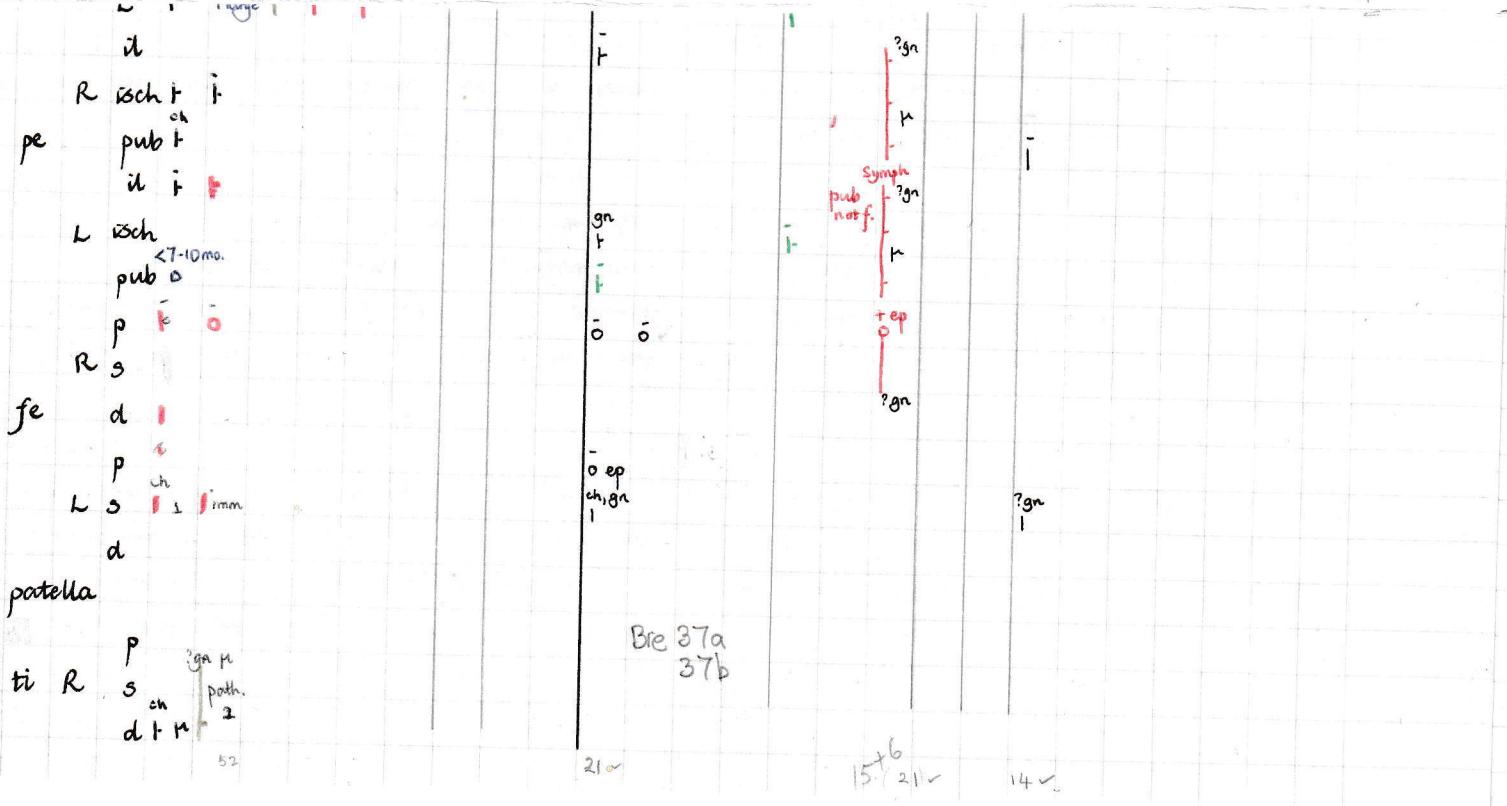
Medieval

03 04

? gn



BIE Roman	04	08 09	CATTLE	Medieval	06 06	09	14
	43, 44, 53, 56, 57 54, 55	21, 22 41, 46.		03 04 25 (one bone)	05 23, 24	13, 11 20.	48 13
hc	R n ch R pec			n			pec
sk	both L 1 mat. 3yg fro, mat occ			occ		mat, pie 1 zyg, fro, lac.	1 prem.
hc	L						
mcx	R L 16 12						
md	R 12 15 L 1			14	11	14	1
Teeth Upr P (t)				t	(t) (t)		
< g mature stage.	M ^{1,2} o t t t t t t t t t R f-stage 1-5	Worm > flat <> 08 41	<	o g >	o < ? g	>	
	M ³ L t 5 x 6 9 5	g-stage 5			05 23		
lwr	I (H)(H)-t-t root			(t) t ← (t)	t (t) o		
dec ps	P f(t) t t t t R J-stage 9/3E L 50						13E
	M _{1,2} g g g og dj						
	R						
sc. neck	M ₃ L f 5 K ₆ f 5 R t small k t L t	09 22	ch	n			
	P imm ch R s bone						
hu	d	gn					
	P undamaged! L s unfused d t r t		- gn				
			o ep				
ra	P r t gn imm ch p R s fusing to tarsus d t	08 4b lo	2 lyr				
			o				
	P large t L s o d t ch		Die 37a 37b				
ulna	R ch L ch, gn v large	large ch	o ep				
			?				
	d il		i				
	R osch t i		t				
pe	pub t il t		gn				
			t				
L	osch pub	< 7-10 mo.	gn				
			t				
	p t o		o				
R	s		o				
fe	d						
	P ch L s imm		o ep ch, gn				
	d		?				



- 04 54 1 sc. gn. K marks on blade. hole centre of blade, looks as if done when fresh. separated.
 " " 2 ti s.d. large, looks old, extra growth of bone all round distal articulation, affecting bone up to 5 cm from the articulation; the joint surface itself is normal and not fused to any tarsal bones.
 04 55 1 fe shaft, a section has been chopped off, 9 cm long x 3 cm, presumably to remove the marrow.

06 20 Part skel. 2 mand, no upper part of skull, no atlas. Axis & rest of cerv. 10/12 thoracic, last two missing - the posterior series doesn't match the lumbar - all 6 there, plus 1st 2 sections, fusing, of the sacrum. 2 pelvis fit - fused acetabulum but synch. pub. unfused.
 Right fem + loose head epiph fits. Left mt could be same ind.
 Dave - were mand. found in place? near neck?
 axis & 3rd cervical are in 05 24; first lumbar is 06 13.
 thor 11 & 12 missing and there's a difference in colour between cerv/thor and lumb/sacry pelvis/mand. No vert. have fused or fusing epiphyses.
 10 right and 10 left ribs. heads unfused. Usually 13 pairs, occasionally 12 or 14.
 fe. looks gnawed at distal end, as does the crest of both ilia
 what β - limb bones removed for meat, ribs defleshed?
 got out again
 Bob says bull or steer, thickness per c. 9mm.
 After careful observation
 β No sign of butchery on the ribs. One, only, has three holes distally, one opposing the other two, and perhaps caused by a dog, although pressure by sharp stones after burial could be responsible.
 nor on the vertebrae.

BIE Roman

ti	L	P ep ch	ti
calc	R	d path artic L i	?path large large ch, gn cav.
astr.	R	L i	ch
			t n
			gn
			t p
R	S	P for R?	ch
mc	d	t ch	gn
L	s	t i	gn
		t f	gn
R	s	t i	gn
mt	d		gn
L	s	t i	gn
		bad digging!	gn
		t i	gn
phal	2	t	t n
	3	t n t	i
atlas			i
axis		gn	i
other cerv	o	i	i
thor	o		i
lumb		t o t t t	remained
sacr		newly complete t no p, not fused to pe.	i
caudal			i
hyoid			i
		59 (73) 161-	21+
			23/ = 44
			flow to count skel?
			4 + 45 skel.

CATTLE

ch
t n
t p
gn
t p
ch
t n
gn
t p
03 25
t n
gn
t n
scratches
on os
t n
t n
05 24
o - one ind.
- 1/3
o Oep. 000
06 20
ten not fused
06 25 X
o 2ep t 5 nf
1 ind. o
many epiph.
20
Tobs
3
+14 = 17

Bre 39a
39b

hc	i		i
ok	iiifit III		i
mx	III	04 41 09 22	i
md	II II ch II LC	T T	i
"	III II III III	eh LC II LC II broken	i
tooth	II II II II	09 22	i
sc	III III		i
hu	III " II III	- ga	i
ra	ch fused	05 23	i
ul	i		i
pe	ch gn		i
fe	ch		i
ti	II II II III	09 22	i
cpl	II		i
tob	II		i
mc	g i	- ch -	i

"Roman"

Fragments

hc	i		
ok	iiifit III		
mx	III	04 41 09 22	
md	II II ch II LC	T T	
"	III II III III	eh LC II LC II broken	
tooth	II II II II	09 22	
sc	III III		
hu	III " II III	- ga	
ra	ch fused	05 23	
ul	i		
pe	ch gn		
fe	ch		
ti	II II II III	09 22	
cpl	II		
tob	II		
mc	g i	- ch -	

central.

tooth	broken			
sc	3 n = ch chch-	0922		
hu	3 n = ch chch-			
ra	fused			
ul				
pe	ch gn			
fe	ch -			
ti	ch ch			
cpl	ch	0922		
tol	ch			
mc	gn	'Roman'		
mt	ii	ch - 28		
mp	ii	k - 5		
phal.	i	gn - 17		
atlas/axis	(442) 550	96 ✓	1 3	
			49 ✓	
				Bie 39a 39b
				20 + 4 red
				12 ✓
				centrot.

0443 Certainly some of the fragments may be of horse. A fragment needs to have 3 characteristics which fit, to go down as cattle, so not many are horse, I think.

The bone is very fragmented, far more than the Iron Age bone.

0443 1 mc v large > 1/2 times size NW72.

" " phal. 1 the large one is v. rough, the large one patho. - extra growth of bone round edges of proximal surface and on the distal volar surface PHOTO.
Other two - one is as small as NW72.

" " 2 mt 2 looks man. It heavy chops, thick - instrument maybe 1-2 mm thick. The marks are 2.5, 3.7, 4.3, 2.3 cm wide

" " 3 phl. the 3 with ? knife marks are on the middle of ~~the~~ dorsal surface, transversely. Do they skin the legs of cattle?

0444 1 sacrum put in my comp. collection.

0457 1 calc. large chop mark medial side half way up corpus. - other calc. found presumably have been chopped right through here.

0447 phl. some alteration of bone proximally; some extra growth of bone and reduction of bone distally.

" " " some roughening of bone. ? age, hard work, trauma, infection.

" " " hole distal volar surface, bone damaged opposite - distal dorsal surface. gnawed.
- hole made by dog?

Bie40

- 04 54 1 sc. gn. K marks on blade. hole centre of blade, looks as if done when fresh. separated.
 " " 2 ti s.d. large, looks old, extra growth of bone all round distal articulation, affecting bone up to 5 cm from the articulation; the joint surface itself is normal and not fused to any tarsal bones.
 04 55 1 fe shaft, a section has been chopped off, 9 cm long x 3 cm, presumably to remove the marrow.

06 20 Part skel. 2 mand, no upper part of skull, no atlas. Axis & rest of cerv. 10/12 thoracic, last two missing - the posterior series doesn't match the lumbar - all 6 there, plus 1st 2 sections, fusing, of the sacrum. 2 pelvis fit - fused acetabulum but synch. pub. unfused.
 Right fem + loose head epiph fits. Left mt could be same ind.
 Dave - were mand. found in place? near neck?
 axis & 3rd cervical are in 05 24; first lumbar is 06 13.
 thor 11 & 12 missing and there's a difference in colour between cerv/thor and lumb/sacry pelvis/mand. No vert. have fused or fusing epiphyses.
 10 right and 10 left ribs. heads unfused. Usually 13 pairs, occasionally 12 or 14.
 fe. looks gnawed at distal end, as does the crest of both ilia
 what β - limb bones removed for meat, ribs defleshed?
 got out again
 Bob says bull or steer, thickness per c. 9mm.
 After careful observation
 β No sign of butchery on the ribs. One, only, has three holes distally, one opposing the other two, and perhaps caused by a dog, although pressure by sharp stones after burial could be responsible.
 nor on the vertebrae.

BIE Roman

ti	L	s	P ch ep	1
		d	path	?
calc	R	t	ö	path large ch
artic	L	i	gn	compl- ctd
astr.	R	ch	fe	
	L	i		
	P			↑
R	s	for R?		W/R soft.
mc	d	ch		a free half shaft.
	p	ep		
	L	s	village	hole
	d	ch, gn.		
R	s	p t z t	gn gn	↑ ↑
mt	d			
	p t			↑
L	s		limon?	bad digging!
	d			↑
1	path? path? -	h ³ - - gn		0
	t p h p t p	t p t p t p t p		
phal	2	t	t	t
	3	t p t	t p t	mm m
atlas				
axis		gn		
other cerv	o			
thor		o		
bumb		- - gn - - - ch		
sacr		t p t l l l		
caudal				
hyoid		1	59	
	(3463)			
	(73)			
			161-	

CATTLE

T k t p
 sh, ign-
 t i

gn ip

ch
 T k

bnt
 T -

0325
 T k

gn

T k
 T t

T k
 path path hole

T k t p T k

scratches
 20.0

0524
 one ind.
 3
 0 step. 000
 0620
 ten not fused
 0623
 + 2 ep. + 5 nf
 1 ind. 0
 many epiph.
 20
 + obs

removed

21+
 23+ = 44

How to count
 skel?
 4+45 skel.

3
 + 14 = 1

Bre 39a
 39b

k i i i i i k ii ii i i ch ii ii

ch
 T k i L c i i

broken

T i i i i

- gn -
 T i i ?gn-

i i i i

gn, ch
 T i i i i ch ch

0523

i i i i

i i i i

i i i i

i i i i

i i i i

- ch -

0523 (ormc) k

central

Fragments

hc	I		
ok			
mx			
md	-Cinn ch LC	T	04 41 0922
"	-ch -ch -	T	
tooth			
sc	n = ch chh -		0922
hu	chh		
ra	ch fused		
ul	ch gn		
pe	ch -		
fe			
ti			
cpl	TT		0922
tol			
mc	gn		
			Roman'

tooth	broken			
sc	3 n = ch chch-	0922		
hu	3 n = ch chch-			
ra	fused			
ul				
pe	ch gn			
fe	ch -			
ti	ch ch			
cpl	ch	0922		
tol	ch			
mc	gn	'Roman'		
mt	ii	ch - 28		
mp	ii	k - 5		
phal.	i	gn - 17		
atlas/axis	(442) 550	96 ✓	1 3	
			49 ✓	
				Bie 39a 39b
				20 + 4 red
				12 ✓
				centrot.

0443 Certainly some of the fragments may be of horse. A fragment needs to have 3 characteristics which fit, to go down as cattle, so not many are horse, I think.

The bone is very fragmented, far more than the Iron Age bone.

0443 1 mc v large > 1/2 times size NW72.

" " phal. 1 the large one is v. rough, the large one pathol. - extra growth of bone round edges of proximal surface and on the distal volar surface PHOTO.
Other two - one is as small as NW72.

" " 2 mt 2 looks man. It heavy chops, thick - instrument maybe 1-2 mm thick. The marks are 2.5, 3.7, 4.3, 2.3 cm wide

" " 3 phl. the 3 with ? knife marks are on the middle of ~~the~~ dorsal surface, transversely. Do they skin the legs of cattle?

0444 1 sacrum put in my comp. collection.

0457 1 calc. large chop mark medial side half way up corpus. - other calc. found presumably have been chopped right through here.

0447 phl. some alteration of bone proximally; some extra growth of bone and reduction of bone distally.

" " " some roughening of bone. ? age, hard work, trauma, infection.

" " " hole distal volar surface, bone damaged opposite - distal dorsal surface. gnawed.
- hole made by dog?

Bie40

B1F CATTLE

Roman Probable (roughly 3/10 R post; 1/10 Med)

	03	04	04	04	04	15	03	
	26, 59, 61, 46, 51		32	43	32, cont.	14, 11, 13, 15,	67	
hc	70, T2	21	r	1		1 imm.		4
sk	1 1	11	111 1111 11		1	1 imm.	17	
mx R								
L		13E		1	1	13		7+33
md R					15			
L			15		15			
dec. P3	3							
P3								
Mx								
dec. P3								
Mx								
L								
I	(6)	(t)(t)11	otottt		t1 (t)		63	
P	(t)	(t)(t)(t)(t)	t(t)(t)t t t	t t t (t) t (t) t t				
M	g < < o	>>>o><	>>>g	o < > < > 1				
sc	111	11	111111		1	1 imm.	20	
hu	111	111111	r	1	1111		19	
ra	1		1t t	t t	1 1 t		20	
wl	11	111	11	o 1	fused			
pe	11	11111	11	t t 11	11		16	
fe	11	1	1	1111	1 t 111		15	
ti		1111	11	t t t	11	10110	16	
aply+tst	111	11111	r gnr	10	t t t 111		23	
mc	11	111	111	t	1 t		39	
mt	11	11111 r	11111	t t 11	1111	t t 1 chopped? wkd 1 t r		
phal.	111	1111111111	r p p n r p n r	t t t t	t t t t	t t t 1 t 1 t	43	
mx frag.	11		1111		1			
md frag	11	11111 cat	1111111111		1	1 bone 10 1111	1	
vert	o	1111	111	o	t 1 o		12	
patella	3	8	80	24	12	83	1	347

B1C 4la
4lb

Long Bone Maturity.

o not fused t fusing t fused.

sc	o		x		1	
hu d	o t	large	t			
ra p	t		t	t t	t	
ph 1	t t t t t *	t t t	t t	t t t t o t		
ph 2	t	t t t t t	t t	t	t	
ti d		ep	t t	o o		
mc d	t t	t	t	t		
mt d	mp o	t	t t mpt t		t t t	
fe p				t t		
fe d						

Long Bone Maturity.

o not fused & fusing + fused.

	sc	o		large	x							
h u d		o t		t								
r a p		t			t	t t	t t	t				
p h 1		t t t t t		t t t	t t		t t t	t o t	t			
p h 2	t	t t t t t		t t t	t t	t	t					
t i d			o	t t			o o					
m c d	t t	t		t	t	t						
m t d	m p o	m p o		t t m p t	t		t t t					
f e p							t t					
f e d												
c a l c	o o	o		t		o	t t t					
t i p				t								
r a d				t			t					
					Bie 4la							
					41b							

03.59 2 calc., one v. large

04.21 1 phd. 5 ph l. 1 has k across dorsal part of shaft. 1 has ch back & front plus reduction and alteration of the bone prox/dorsal, scarcely affecting art. surface.

15.14 1 phl v. rough. Some exostosis on distal/dorsal edge side affecting the edge of the articulation surface.

Bie 42

CATTE

BIE Red. Rognu

CATTLE JAWS

maxillae in pencil. g = mature stage □ ∴ < and > g.

Roman

Feature	L	R	I ₁	I ₂	I ₃	P ₂	P ₃	M ₁	M ₂	M ₃	Stage
---------	---	---	----------------	----------------	----------------	----------------	----------------	----------------	----------------	----------------	-------

04 43	L		a	w	/						
04 54	R		(w)	(w)	(j)	f	½			2	
" "	L		w	w	worn flat	w	w		6	=	M ³ is still fairly v shaped. reduction of bone above P ⁴ , buccal side, considerable alteration of root growth at P ⁴ . possible gap?
" "	L		(w)	< g	15	½	14	12	41	5	DRAWING OF P ⁴ ?
04 55	R		e	k	j	g					

Medieval

04 52	R		12	12	8						
			g	g	c	32	4				
											= 5

almost certainly
one jaw

" / / / V

I₄ quite deep in jaw still - c. 4 mm below bone.

about which I it is
can't be certain enough for it to be worth
quoting the relationship I/M.

05 23	R		(a) E								
-------	---	--	-------	--	--	--	--	--	--	--	--

1

very slight wear on P₄. a few days or week old,
slightly more advanced than NW72 newborn
calf.

06 13	L	*	*	*	*	w	w	9	9	9	6
-------	---	---	---	---	---	---	---	---	---	---	---

Cheek tooth row 137

06 20	R	>	*	*	*	V	(1)	½	w	(k)	j
-------	---	---	---	---	---	---	-----	---	---	-----	---

" " 137

" " L / / V (1) E w (k)

E =

* Loose teeth probably from this individual altho already now filled with mud.

I₁'s full wear, I₂'s worn about 3/4 way across occlusal surface. Age from anterior teeth 2½ years ± 2 months
using Brown 1960, modern cattle.

14 13	L		e								
-------	---	--	---	--	--	--	--	--	--	--	--

Bie 43a
43b

Probable Roman

04 21	L		(j) (w)								
" "	L			k							

Also 2 R dec p₂, light wear

04 21	L		/	/	broken /	8	5				
-------	---	--	---	---	----------	---	---	--	--	--	--

no parad.

09 43	L		(j)	f							
-------	---	--	-----	---	--	--	--	--	--	--	--

none

04 32	R										
-------	---	--	--	--	--	--	--	--	--	--	--

light

15 14	L										
-------	---	--	--	--	--	--	--	--	--	--	--

k

6E

15 14	L		(w)	<	=	3					
-------	---	--	-----	---	---	---	--	--	--	--	--

k k g .

5

M₃ 3rd want present much reduced at root and merging into 2nd unit near the occlusal surface.

Bie 43a
43b

CATTLE MEASUREMENTS

	Roman	Medieval	Probable Roman
hc	0443 0454	0447	0370 0432 1514
Loc	R -		- c.85
Bas circ.	114		118 256
diam. max	43	50	42 58
min	31	37	31 45
→ Index			78% adult
I Age	3	2	3
II Length	probably 1	probably 2	? 1
III Curve	2 2	2	some twist
IV Tip	- -	-	roundish pointed from present to old?
V Sex	?	out	?
Direction of horn	out & front		fwda up
	0443	0447	0359 1514 1511
SC LG	R 46 small	c65	large 62
SLC	0443	63	63 41 56.5
hu BT	L 66		88 large
	0456 0454 0455		0421 0943
ra GL	307		
Bp	90.6	large includes c.44	94.4 67
SD	44.1	includes mina	
Bd	84 L 85	not defined meas. both large	
fe			
	0443	0447 0447 0613	0943
ti		L	Bp 84
		small p	0943 0943
		68.0 (51)	56.7 53
calc GL	162.8 0457	62.0	1513
astr GLlat	131 0454	0432	115.7
	59.2	62.5	0432 1514 1515
	53.1	55.0	73 54
	36.8	37.6	54.4 68 51.7
mc GL	0454 0455 0455	37.5	37.5 47.2 33.8
	175	L	0432 174
Bp	61.8 L 55.7 R 48.7	57	47.8 48.6
SD	28.7	Bieetta 44.6	28.9
Bd	53.6	57.6	50.8
mt GL	0455	0447 0447 L 190 R 189	0432 1514 1514 1513
Bp	52.6	42.3 37.6	47.2 46.0
SD	probably one bone.	small 8	
Bd	60.0	20.5	
1st phal GLpe	a 67 a 61 a 56 a 51	44.5 45.8	51.1 60.9
Bp	36.4 33 26	55.3 63.7	Medieval
10) 57.9 37.6 9) 29.1 5	32.7 34.1 1.3 32.5	54 a 57.1 a 53.0	0447 0447 0447
		- 26.0 31.8	54 62.6 54.6 51.2
		29.4 30.8	64 59.7 59.7 51.5 52.2
3rd phal DLS	72 81 76	Med. 0613	81 82 65.7 64 c.81 81
		1st phal GLpe 56.3	large 0370 0421 0421 0432 0432
Med	R 67	Bp 32.6	60.5 65 59.7 59.7 62 51.5 52.2
			35.5 39.2 35.6 31.9 27.3 35.6 25.6 -

