JW/TT

1634

NEW BARN DOWN AND EARL'S FARM DOWN. HUMAN BONE REPORT

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Eleven cremations and the remains of eleven individuals (inhumations) from seven barrows were presented for study. Five of the 'cremations' consist of very small amounts of cremated bone which obviously do not represent an entire cremated body. There are seven adult inhumations, and four children under sixteen years old. The unburnt bones are generally well preserved with only slight surface erosion. A detailed description of the human bones from each site is given below.

G58 (BELL BARROW)

(1) Cremation (Barrow I, 1956)

These fairly well calcined remains of an adult (possibly female) represent most parts of the body. The bodies of about twelve thoracic and lumbar vertebrae are present. Most of these display slight bony lipping, (due to degenerative joint disease (osteoarthritis)), indicating that the individual was probably more than 25 years old. Several fragments of long bone shaft are stained green, presumably due to contact with a copper or bronze object. There is no evidence to suggest that more than one individual is present.

G61 (BOWL BARROW)

(1) Cremation (Cremation Pit 1)

There are a few small fragments of lightly burnt bone, including long bone shafts, ribs, and a few hand bones, from an adult individual.

(2) Cremation (Cremation Pit 2)

There are a few incompletely burnt bone fragments (average size about $1cm^2$), including long bone shafts, skull, phalanx fragments, and the roots of permanent teeth. There is no evidence to suggest that more than one adult is present.

(3) Cremation (Cremation Pit 3)

Well calcined remains, representing most of the body of an adult, are present. The general size of the bones and shape of the pelvis fragments suggest that the individual was probably female. The age of the individual is not apparent.

(4) Inhumation, infant (B3 ~~52~~ II)

This is the fragmentary and eroded skeleton of an infant, lacking some ribs and vertebrae, bones from the hands and feet and the left arm and leg. The crowns of

eight deciduous teeth are present (three upper incisors, one upper canine, two upper molars, and two lower molars). The roots of the incisor teeth are partly formed. The development of the teeth corresponds to that of a child about 9 (± 3) months. However, the general size of the bones seems to correspond with an age of about 18 (± 6) months. As a compromise an age estimation of about 12 (± 6) months may be suggested.

(5) Inhumations (Burial I)

Four boxes of bones (three labelled "B3", one unlabelled) are probably all from Burial I. Mixed with the adult bones are a few fragments of a child's skeleton. The bones may be divided as follows:-

Young adult female (Inhumation I).

The skeleton lacks the clavicles, left scapula and humerus, and left ossa innominata. No wormian bones, orbital osteoporosis, torus mandibularis, t. auditivus, t. palatinus, or t. maxillaris, were observed. The sphenoid articulation is of the normal (spheno-parietal) type.

Twenty six teeth are present. There is no ante-mortem tooth loss. The lower third molars are erupted; the uppers are erupting. A lower second molar displays occlusal caries. The dentition indicates that the individual was probably between 17 and 25 years old. There is slight calculus, very slight alveolar bone recession, and a small lingual cusp on the upper canines.

In the middle of the shaft of one of the metacarpals, there is deformation and angulation. X-ray examination confirmed that this was a fracture suffered many years before death, and subsequently healed.

Child, 5 (± 1) years old

Fragments of skull vault, femora, humeri, and a fragment of the right maxilla are present. There are two deciduous molars; a permanent molar and an incisor, with partly formed roots; the crown of a permanent premolar with little of the root formed. There is a small enamel pearl on the root of the upper right first permanent molar.

Unburnt bones (B3 29)

These are skull, vertebrae, rib and long bone fragments from the topsoil above inhumation I. Some of these probably represent ploughed-up bones from the inhumation. However, the presence of a second atlas vertebra, a fragment of the right frontal (duplicating the skull fragments from inhumation I), and five

anterior teeth (also duplicated in inhumation I), indicate the presence of a second adult individual. The teeth are only slightly worn, suggesting that this individual was probably fairly young.

G61a (DISC BARROW)

(1) Cremation (rectangular grave)

These are the well calcined remains of one adult. Most parts of the body are represented. There are no real indications of sex.

(2) Inhumations (Pit II)

The mixed remains of a minimum of three individuals are present. These may be grouped as follows:-

Infant, 4 ($\pm$ 1) years old.

There are fragments of mandible, maxilla, ilium, ischium, femur, and tibia. Nine deciduous teeth, and eleven partly developed permanent teeth are also present.

Adolescent, 13-16 years old

The skeleton lacks some of the skull, left arm, some ribs and vertebrae, bones from the hands, and some feet bones. The upper left maxilla, containing six teeth, is present. The third molar is unerupted. There is enamel polishing of $\lfloor 6$, but little wear of $\lfloor 7$. All of the major epiphyses are unfused, but the pelvis has united at the acetabulum.

Young adult

The possible presence of an adult individual is indicated by a few skull fragments, a metatarsal fragment, and two lower first (or second) molars. There is only slight wear of the teeth, indicating that this was a fairly young individual.

G67 (DISC BARROW)

(1) Cremation (Site III, burial I)

There is a small quantity of well calcined bone, mainly fragments of long bone shafts.

(2) Inhumation (Site III)

There are fragments of the thorax, humeri, pelvis, sacrum, and most of the bones

from the hands and feet of an adult female, (or weak male). Most vertebrae and the sacrum are slightly affected by degenerative joint disease. Two lower lumbar vertebrae display a medium degree of lipping. There are two small, pitted, porous areas (one on the proximal articulation of a metacarpal, and one on a tarsus). These are similar to osteochondritis dissecans in appearance, but their aetiology is uncertain.

There is one heavily worn upper first (or second) molar. When considered with the evidence of degenerative joint disease, this suggests that the individual was probably middle aged. The tooth displays interproximal neck caries and medium calculus.

In the mid-shaft region of a floating rib, there is a wing-shaped exostosis about ½ cm. long at either side of the shaft, associated with slight angulation. This probably represents the site of an old healed fracture.

(3) Inhumation (Burial II)

This is the fairly complete fragmentary skeleton of a female, probably aged between 35 and 45 years. This is a separate individual from (2) above (as is established by the presence of a left humerus in each). There is one lambdoid wormian bone. No orbital osteoporosis, torus mandibularis, t. auditivus, t. palatinus, or t. maxillaris, were observed. The sphenoid articulation was of the usual spheno-parietal type. Nineteen teeth are present. One upper first premolar displays distal caries. The lower left first molar had been lost ante-mortem, and a dental abscess was associated with this tooth. There is slight calculus, and slight alveolar bone recession.

The proximal end of the left ulna, and distal end of the left tibia are slightly affected by degenerative joint disease. One of the first phalanges of the hand has a lip of bone on the medial side projecting about 5 mm. above the level of the proximal articular surface. This may also be due to degenerative joint disease.

The proximal articular surface of the first phalanx of the halux is slightly pitted, as described in G67(2).

G72 (DOUBLE BOWL BARROW)

(1) Cremation (Central cremation pit)

The well calcined remains of one adult individual (more than 20 years old) are present. There are fragments of skull (cranial sutures partly obliterated), long bone shaft fragments, and some bones from the hands and feet. There are no real indications of the sex of the individual.

(2) "Cremation" (Pit II 45)

There is a small quantity of burnt bone, mainly skull and long bone shaft fragments. These remains are not necessarily human.

(3) Cremation (Contents of Urn 42)

A few burnt fragments of skull and long bone shafts are present. Judging by the thickness of the bones, the individual may have been immature.

G73 (BOWL BARROW)

(1) Cremation (E.F.D. Site II Bag 10) ? G73 ?

The fairly well calcined remains of an adult are present. Most of the body is represented. The skull sutures are open. There are no reliable indications of age and sex. There is no evidence to suggest that more than one individual is present.

(2) Inhumation (E.F.D. Site II) ? G73 ?

These remains were labelled as a cremation, but although fragmentary, they are unburnt. There are fragments from most of the body (except the skull, humerus, and femora). One upper and one lower molar, a lower canine and first premolar, are present. The tooth wear is fairly heavy, suggesting that the individual may have been middle aged. The general size and robustness of the bones seem to indicate the female sex.

A fragment from the distal end of a fibula displays slight roughening and grooving of the surface of the bone. This is probably a reaction (periostitis) to infection.

G74 BELL BARROW

(1) Cremation (Pit 2)

Most of the body, except the ribs, clavicles, and pelvic girdle, is represented. The bones are burnt, but many are incompletely calcified. The skull sutures are open, and the epiphyses of the proximal ends of the humerus, femur, and tibia, are unfused. The proximal epiphysis of the radius and epiphyses of the bones of the hands and feet are fused. The crown of a lower permanent molar with unformed roots is also present.

The condition of the epiphyses suggests that the individual was aged between 13 and 18 years.

(2) E.F.D. Site I, D. 4' sq. 22.

There are a few unburnt fragments of long bones, skull vault (with sutures open), ribs, vertebrae, and bones from the hands and feet. Two permanent teeth, an unfused coracoid process of the scapula and an epiphysis from the distal end of the radius, suggest that the individual was between 14 and 22 years old. This could therefore conceivably represent the same individual as (1) above.

(3) Inhumation (Burial I)

This is a well preserved skeleton, lacking skull, vertebrae, clavicles, scapulae, left humerus, and bones of the hands and feet. The sexual characteristics of this skeleton are intermediate in type. The general robustness indicates the male sex, although the sciatic notch of the pelvis is quite wide.

There is slight bony lipping of the distal ends of the ulnae and radii , auricular area of the pelvis, hip, and knee joints. The clavicular notch of the sternum is also affected by degenerative joint disease to a medium degree. The manubrium and body of the sternum are fused. This is a change which sometimes occurs in elderly individuals.

The curve of the distal end of the left ulna is exaggerated, associated with slight swelling of the shaft. X-ray examination indicated that the bone had been remodelled, presumably as a result of fracturing. This may have been a greenstick fracture suffered in childhood.

SUMMARY

As the remains originate from a number of different sites, there seems to be no particular justification for considering the above individuals as representative of a single 'population'. However, for the sake of completion, a few concluding comments may be made:-

The dental health of the skeletons generally is fairly good. Only three teeth are carious, and there is only one case of ante-mortem tooth loss. There is no case of severe periodontal disease as indicated by alveolar bone recession. Only one (middle aged) individual displayed more than a slight degree of bony lipping due to degenerative joint disease . There were three probable healed fractures (one rib, one ulna, and one metacarpal). One skeleton produced evidence of an inflammatory reaction to infection (on a fibula).

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CREMATIONS

No	Wt. gms TOTAL	Unident Wt	Skull Wt	Skull %	Longbones Wt	Longbones %	Vertebrae Wt	Vertebrae %	Ribs Wt	Ribs %	Hands & Ft Wt	Hands & Ft %	Pelvis Wt	Pelvis %	pect. g Wt	pect. g %	Approx. Ave. size frags.
G58	2600	1690	205	22%	430	47%	85	9%	60	6%	35	4%	75	8%	20	2%	4 cm^2
G61a. rect. grave 1)	2700	2035	95	14%	550	82%	8	1%	0	0	12	1%	0	0	0	0	3 cm^2
G72 1)	307	210	35	36%	60	61%	0	0	0	0	2	2%	0	0	0	0	$1\frac{1}{2}$ cm^2
G73 1)	705	380	60	18%	255	78%	7	2%	0	0	3	1%	0	0	0	0	2 cm^2
G74 1)	1895	1150	205	27%	503	67%	30	4%	0	0	7	1%	0	0	0	0	3 cm^2
G61 Pit 3	1047	583	98	21%	294	63%	14	3%	23	4%	8	1%	25	5%	2	1%	2 cm^2

* % of identified bone

LONG BONE MEASUREMENTS

	G67 2) I		G67 3) II		G74 3) I		G61 5) I	
	L	R	L	R	L	R	L	R
Max L. femur (FeL_1)	-		418	421	441	448	448	448
Min. A.P. diam. (FeD_1)	-	-	23.3	22.8	27.0	26.9	22.9	22.3
Trans. diam. (FeD_2)	-	-	32.5	33.6	34.2	33.4	35.0	35.5
Max. L. tibia (TiL_1)	-	-	-	-	374	375(?)	-	360
Max. A.P. diam. (TiD_1)	-	-	30.5	-	35.9	35.4	-	30.8
Trans. diam. (TiD_2)	-	-	23.4	-	22.5	22.6	-	19.8
Max. L. Humerus (HuL_1)	316	-	-	-	-	-	-	317(?)
Max. diam. (HuD_1)	20.0	-	-	-	-	-	-	21(?)
Min. diam. (HuD_2)	17.2	-	-	-	-	-	-	13.2(?)
Max. L. radius (RaL_1)	-	-	-	-	254	254	-	-
Max. L. ulna (UlL_1)	-	-	-	-	274(?)	278	-	-
STATURE * (max.)	-		5' 2½"		5' 6"		5' 5"	

* Using the formulae of Trotter and Gleser, 1952, 1958.

SKULL MEASUREMENTS

		G67 II (3) ♀	G61 I (5) ♀
Glab. - occip. L.	L	181	190
Max. parietal B.	B	-	138?
Basi. - bregmatic Ht.	H^1	-	137(?)
Basi. - nasion L.	LB	-	104(?)
Frontal arc	S_1	-	136
Parietal arc	S_2	123	135
Occipital arc	S_3	111	124
Frontal Chord	S^1_1	-	117.1
Parietal Chord	S^1_2	111	119.3
Occipital Chord	S^1_3	97.7	99.7
Palate B.	G_2	-	41(?)
Foraminal L.	FL	-	34.5
Simotic chord	SC	-	11.8
Bi-condylar width	W_1	-	126.7(?)
Bimental B	ZZ	-	45.9
Least ramus B	RB	32.3	34.7
Sagit. Ht. mandib.	H_1	-	29.7
Max. mandib. L.	ML	-	99
Proj. L. ramus	RL	-	54.5
Ht. at 2nd molar	M_2H	27.4(?)	25.8
Condyle L.	CYL	19.7	19.8(?)
Coronoid Ht	CH	58.3	62.2
Mandib. angle	M/	-	116° 30'
Min. frontal B.	B'	-	99.9