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**Assessment of the biological remains from excavations at Whithorn Priory,
Galloway (site code: 1996.0374)**

by

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Summary

A group of sediment samples, human bones and a small quantity of other bone, from deposits of 8th to 12th century date at Whithorn Priory, Galloway, have been assessed for their bioarchaeological potential.

A few charred grains and a small quantity of charcoal were the only plant remains present in the samples and numbers were too small to be of interpretative value. Invertebrate remains were absent from the material assessed. The small quantity of poorly preserved, heavily fragmented, vertebrate remains was also of little interpretive value

Preservation of the human remains was poor as a result of the truncation of the graves and the nature of the underlying geology, so that separation of individuals was difficult. Information regarding numbers of individuals, age, sex and pathology was noted where possible and the data combined with those for the material from the 1995 excavation. It is recommended that the data be assimilated with unpublished material from earlier excavations.

Keywords: WHITHORN; GALLOWAY; PRIORY; NORTHUMBRIAN; MEDIEVAL; ASSESSMENT; CHARCOAL; CHARRED GRAIN; VERTEBRATE REMAINS; HUMAN REMAINS

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Introduction

Whithorn Priory and the immediately surrounding area have been subjected to a series of excavations, the latest of which was undertaken in 1996 by Amanda Clarke of the York Archaeological Trust, with funding from the Whithorn Trust. The 1996 excavation was located on the hill-top to the west of the ruined nave and was a continuation of the trench begun in the 1995 season. It was taken down to the undisturbed subsoil. The biological remains from the 1995 season have been assessed previously (Dobney *et al.* 1996).

Approximately 72 graves were excavated in all, over half dated to the Northumbrian period (7/8th century). The remainder were of later date (11/12th century). The two distinct phases of the graveyard indicate that it was in use for some considerable time.

A total of 15 samples, of which two were 'spot' and 13 'GBA' samples (*sensu* Dobney *et al.* 1992), one standard box of animal bones and six boxes (two standard and four 32x52x24 cm) of human bone were recovered from the 1996 excavations and submitted to the EAU for assessment of their bioarchaeological potential.

Methods

Sediment samples

All of the samples were inspected in the laboratory and, on the basis of this inspection and information supplied by the excavator, seven were selected for further analysis. A description of the lithology of all the GBA samples was recorded using a standard *pro forma*. Subsamples of 2 kg were taken from seven of the GBAs for extraction of macrofossil remains, following procedures of Kenward *et al.* (1980; 1986).

For all of the samples processed, 'washovers' were taken rather than 'flots', as the organic content was extremely low. The resulting washovers and residues were examined for plant and invertebrate macrofossils and bone. The two spot samples were examined briefly and commented upon.

Non-human vertebrate remains

The animal and burnt bone material was examined and a basic archive produced. A record was made of preservation, quantities (numbers and weights) and identifications where appropriate.

Human remains

All the excavated human skeletal material was scanned and a basic archive produced (see Tables 3 & 4). Determination of sex and age was carried out, where possible, using methods described by Brothwell (1972) and Bass (1987), and any additional relevant information was also recorded.

Results

Sediment samples

Details of the nature of the sediments and the results obtained can be found in Table 1.

None of the washovers produced enough biological remains for useful interpretation. Small numbers of charred grains were present in Samples 1004, 1009 and 1011, and included fragments identified as oat (*Avena*) and barley (*Hordeum*). Sample 1004 also contained two charred weed seeds. Charcoal fragments (to 10 mm) were recovered from all the samples processed, some identified as oak (*Quercus*).

Five samples were contaminated by modern rootlets and also earthworm capsules. No invertebrates were recorded from any of the processed samples. The residues were mostly stone and sand, traces of charcoal being the only biological content.

Spot sample 1002 was identified as being oak. Spot sample 1003 was identified as containing iron corrosion products of unclear origin but no further comment could be made.

Non-human vertebrate remains

An archive of the animal and burnt bone can be found in Table 2.

Preservation of the animal bone was poor or very poor with very little except tooth enamel (the hardest substance in the body) surviving. The burnt bone was, on the whole, better preserved than the unburnt material. The fragments were, however, so small as to render identification impossible.

Most of the identifiable animal bone fragments were from cattle, most of the unidentifiable portion being from large mammal bones, probably also cattle. The only identifiable burnt bone was a pig 2nd phalanx. It was impossible to determine whether most of the burnt material was of animal or human origin.

Human remains

An archive of the human remains can be found in Tables 3 and 4.

Preservation of the human remains was generally poor or very poor. The surfaces of most fragments appeared eroded and the broken surfaces 'battered'. The material was also heavily comminuted. The bones were very brittle and as a result many showed extensive fresh breakage. The shallowness of the deposits, free draining nature of the subsoil, and intercutting of many of the earlier graves, had obviously hastened the destruction of many of the

human remains from the cemetery. However, the overall preservation of the material from the 1996 excavation was marginally better than that from the 1995 season (Dobney *et al.* 1996).

The intercutting nature of the graves meant that much of the material was mixed. Seventy two contexts contained articulated human remains and 68 groups of disarticulated fragments were also recovered.

The poor preservation meant that much of the basic information (e.g. age and sex) was difficult to determine. Fifty two groups of bones could be attributed an approximate age at death (mostly on the basis of dental eruption and attrition). Of these, 16 were either juvenile or sub-adult (i.e. <18 years) and, of the remaining 36 adults, only two had achieved an advanced age (in this case >45 years). The remains of ten individuals were recorded as male, and eight as possibly male, whilst five were recorded as female and seven as possibly female.

A greater proportion of fragments showed evidence of pathology than in the 1995 material, perhaps as a result of the slightly better preservation. Many teeth had calculus deposits, mostly moderate, although several were recorded as severe. Unusually for skeletons of this period, there were a considerable number of carious cavities in the teeth, most being situated at the cemento-enamel junction.

Skeleton 1609 (Context 2359) showed evidence of advanced osteoarthritis in the left hip joint, with eburnation and pitting of the femoral head. The same individual showed signs of having been affected by rickets earlier in life; the tibiae and left fibula were bowed, while the femora were heavily buttressed along the linear aspera and remodelled around a number of the muscle insertions.

The teeth from Skeleton 1605 (Context 2346) showed enamel hypoplasia. The canines had four lines, the premolars two and the first two molars one on each. In addition the lower right M3 was

deformed/dwarfed and the upper right M3 was impacted.

The mandible of Skeleton 1617 (Context 2376) had been chopped between the M3 and the ascending ramus ante-, or immediately post-mortem. The angle and position of the cut suggested that an implement had passed through the facial area, ending in the mandible. This may well have been the cause of death of this individual.

The interior surface of the skull of Skeleton 1618 (Context 2380) showed a small indentation that, from its position, suggested that it was caused by an astrocytoma - a non-aggressive, benign tumour.

Skeleton 1619 (Context 2383) showed a possible genetically linked phenomenon (Wormian bones) in the sagittal suture of the skull. Wormian bones were also noted in Context 2278 from the 1995 material (Dobney *et al.* 1996). The presence of this characteristic in such a small assemblage may indicate that these individuals were related.

The anterior teeth from Skeleton 1621 (Context 2394) showed excessive wear, and in some cases the enamel crown had completely worn down. This may suggest that the individual was using the teeth for an activity other than eating. This phenomenon has been seen amongst Inuit populations who chew leather to make it pliable.

Two bones were complete enough to give greatest length measurements which in turn yielded stature estimates. One tibia of Skeleton 1634 (Context 2482) gave an estimated height of 166 cm, whilst the left ulna of Skeleton 1667 (Context 2641) gave an estimated height of 174 cm.

Discussion and Statement of potential

Sediment samples

Plant remains from these samples were limited to a few charred grains and charcoal fragments, of little interpretative

value. There were no invertebrate remains from the processed samples. The sediment samples offer almost no potential for further interpretation of the site.

Non-human vertebrate remains

The poor preservation and severe fragmentation of the vertebrate material means that it can offer no further significant information.

Human remains

The analysis of the bones excavated during the 1996 season has contributed limited information about several aspects of burial practices at Northumbrian Whithorn. However, the soil type, and consequent poor preservation of the material, means that there is limited potential for detailed inferences concerning the past human population.

Similarly poorly preserved remains were recovered in 1993 (Pollack 1994) and 1995 (Dobney *et al.* 1996), while in years previous to 1993 remains were recorded but not published. Comparison of the 1996 and 1995 material has allowed further observations to be made on the past human population, but it would still be easier to place the material into its wider context if data from earlier excavated material were also available. Human remains of this date and from this region are rare, particularly from a site of such high ecclesiastical status. A synthesis of all available data is therefore essential.

Recommendations

Sediment samples

No further work on this material is recommended and it is probably not worth sampling these kinds of deposits for plant remains routinely, although potential for survival of charred cereals (albeit in very low concentrations) has been demonstrated. If deposits containing larger concentrations of charred material, or waterlogged deposits, are exposed then

every effort should be made to sample and investigate them.

Vertebrate remains

The vertebrate remains from the cemetery areas were often from mixed deposits and so offer very little potential for further work. No further work on the material from the 1996 excavations is recommended.

Human remains

Although the material from the 1996 excavations is of limited interpretative value in isolation, it does form part of a larger archive of important material. It is recommended that a detailed record of the human skeletal remains from 1996 be made for archival purposes and that the data be assimilated with those from earlier excavations and the results of analysis be published together.

Retention and Disposal

The human bones should be retained for the present. The non-human bones and samples should be retained until report publication in case any new questions arise which might be addressed using them.

Archive

All material is currently stored in the Environmental Archaeology Unit, University of York, along with paper and electronic records pertaining to the work described here.

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Table 1. Results of assessments of GBA and spot samples from excavations Whithorn in 1996.

Context no.	Sample no.	Sediment description and results of analysis
2379	1002	Spot find of wood. Identified as oak.
2385	1003	Iron corrosion product scatter in fill. No further work.
2478	1004	Moist, mid-dark redish grey-brown, crumbly (working plastic), slightly clay silt with a few 6-60 mm stones and charcoal. The small washover of about 30 cm ³ consisted of charcoal (to 10 mm) with traces of charred twig fragments, roots, a few moderately well preserved charred cereal grains (6 barley, <i>Hordeum</i> , and 2 oats, <i>Avena</i>) and two seeds from plants which were weeds; there was a rather large residue of angular stones (to 40 mm) and sand.
2478	1006	Just moist, mid-dark greyish brown to dark grey, crumbly (working plastic), clay silt with a few stones (6-20 mm) and charcoal. Not processed.
2567	1007	Almost dry, light-mid yellowish grey brown, crumbly (working sticky-plastic when wet), clay silt with a few 2-20 mm stones. Not processed.
2619	1009	Just moist, redish grey brown, crumbly (working sticky-plastic when wet), slightly sandy, clay silt with a few 6-60 mm stones. The small washover consisted of about 15-20 cm ³ of charcoal (to 10 mm) with traces of charred barley (1 or 2 grains); the rather large residue was of angular stones (to 50 mm) and sand.
2619	1011	Moist, mid redish grey brown, crumbly (working plastic), slightly sandy, clay silt with stones 2->60 mm, abundant in the 20-60 mm range. The small washover of about 15 cm ³ was of charcoal (to 5 mm) with a few (6) moderately well preserved barley grains and one or two unidentified fragmentary cereal grains; the rather large residue was of angular stones (to 40 mm) and sand.
2670	1014	Moist, mid greyish brown (with small patches of light buff material), crumbly (working plastic and sticky), clay silt with a few 6-20 mm stones. Not processed
2694	1018	Moist, light-mid pinkish grey brown, crumbly (working sticky and plastic), slightly sandy, silty clay with flints, 20-60 mm stones and charcoal. The small washover of about 15 cm ³ consisted of charcoal (to 10 mm, including oak, <i>Quercus</i>); the rather small residue was of angular stones (to 30 mm) and sand.
2709	1022	Moist, mid redish grey brown, crumbly (working plastic and sticky), slightly sandy, clay silt with a few 2-60 mm stones. The very small washover of a few cm ³ of charcoal (to 5 mm) also contained some ?modern root/rootlet fragments; the rather large residue was of angular stones (to 35 mm) and sand.
2747	1024	Moist, mid redish grey brown, crumbly (working plastic and sticky), clay silt with a few 2-20 mm stones and charcoal. Not processed
2745	1025	Moist, light-mid greyish orange brown, crumbly (working plastic), slightly sandy, clay silt with 20-60 mm stones common and charcoal. The small washover of about 20 cm ³ was of charcoal (to 5 mm); the moderate-sized residue consisted of angular stones (to 35 mm) and sand.
2806	1035	Moist, redish grey brown with patches of pale orange brown, crumbly (working plastic), clay silt with a few 2-20 mm stones and charcoal. Not processed.

Context no.	Sample no.	Sediment description and results of analysis
2803	1036	Moist, mid-dark redish grey brown, crumbly (working plastic), slightly sandy, clay silt with bluish grey and buff clay mineral lumps, a few 1-6 and 20-60 mm stones, pot and charcoal flecks. Not processed
2813	1038	Moist, mid redish grey brown to light-mid red brown, crumbly (working plastic), slightly sandy, clay silt with 6-60 mm stones common. The small washover of about 15 cm ³ was of charcoal (to 5 mm) with some ?modern rootlets; the rather large residue was of angular stones (to 40 mm) and sand.

Table 2: The vertebrate remains from excavations Whithorn in 1996.

Key: unid = unidentified, frag/s = fragment/s, poss = possibly, M = molar, PM = premolar, DP = deciduous premolar

Context	Find No.	Preservation	Notes	Weight ID	Weight
2363	1063	Poor	1 cow M1/M2, 4 tooth enamel frags	7.9	3.1
2371	1071	Very Poor	1 Cow metatarsal frag	23.9	
2358	1095	Poor	1 Cow DP4, 1 Cow DP3	3.6	
2452	1132	Poor	1 Cow M3	16.8	
2319	1195	Poor	3 tooth enamel frags		2.5
2556	1219	Poor	1 Cow M3	20.5	
2437	1284	Poor	approx. 13 tooth enamel frags		4.0
2709	1500	Poor	approx. 15 tooth enamel frags		8.4
2709	1515	Poor	4 tooth enamel frags		1.5
2442	1120	Burnt	1 unid frag		0.1
2478	1156	Burnt	48 unid frags		3.8
2213	1169	Burnt	1 unid frag		1.2
2497	1177	Burnt	2 unid frags		2.5
2516	1182	Burnt	5 unid frags		1.8
2362	1186	Burnt	1 unid frag		1.5
2525	1201	Burnt	2 unid frags		0.7
2510	1203	Burnt	6 unid frags		0.6
2549	1218	Burnt	2 unid frags		0.2
2556	1236	Burnt	2 unid frags (1 poss skull)		1.9
2603	1259	Burnt	1 unid frag		0.1
2622	1305	Burnt	9 unid frags		2.5
2492	1312	Burnt	4 unid frags		0.8
2637	1334	Burnt	1 unid frag		0.7
2492	1336	Burnt	2 unid frags		0.6
2492	1359	Burnt	1 unid frag		1.7
2654	1361	Burnt	1 unid frag		0.4
2653	1365	Burnt	7 unid frags		0.5
2492	1387	Burnt	1 unid frag		0.1
2492	1394	Burnt	1 unid frag		0.1
2492	1395	Burnt	1 unid frag		0.9
2492	1399	Burnt	1 unid frag		0.6
2653	1439	Burnt	5 unid frags		1.3
2691	1440	Burnt	1 unid frag		0.5
2691	1442	Burnt	1 unid frag (poss skull)		0.8

Context	Find No.	Preservation	Notes	Weight ID	Weight
2653	1446	Burnt	4 unid frags		0.5
2653	1449	Burnt	9 unid frags		1.1
2653	1457	Burnt	3 unid frags		0.4
2653	1459	Burnt	3 unid frags		0.8
2653	1461	Burnt	12 unid frags		1.7
2690	1463	Burnt	27 unid frags mostly tooth enamel		2.1
2697	1465	Burnt	2 unid frags		1.1
2692	1466	Burnt	1 unid frag		1.0
2709	1482	Burnt	1 unid frag		0.6
2702	1484	Burnt	1 pig 2nd phalanx		0.8
2709	1493	Burnt	2 unid frags		0.6
2709	1498	Burnt	12 unid frags		4.2
2709	1501	Burnt	1 unid frag		0.4
2709	1503	Burnt	1 unid frag		1.1
2730	1513	Burnt	1 unid frag		0.7
2719	1520	Burnt	2 unid frags		1.7
2745	1523	Burnt	3 unid frags		1.5
2771	1530	Burnt	1 unid frag		0.3
2781	1531	Burnt	1 unid frag		0.3
2781	1533	Burnt	1 unid frag		0.5
2709	1537	Burnt	13 unid frags		2.8
2781	1542	Burnt	30 unid frags		10.5
2795	1546	Burnt	1 unid frag		0.4
2803	1547	Burnt	1 unid frag		0.6
2795	1548	Burnt	1 unid frag		1.7
2803	1551	Burnt	1 unid frag		0.2
2625	1554	Burnt	1 unid frag		1.7
2707	1555	Burnt	1 unid frag		0.6
2804	1566	Burnt	4 unid frags		2.5
2785	1568	Burnt	1 unid frag		0.4
2707	1570	Burnt	1 unid frag (poss large mammal vertebra)		1.6
2719	1571	Burnt	3 unid frags (1 poss Caprovid metapodial)		2.6
2816	1581	Burnt	3 unid frags		1.7

Table 3: The Articulated Human remains from excavations Whithorn in 1996.

Key: unid = unidentified, frag/s = fragment/s, poss = possibly, M = molar, PM = premolar, DP = deciduous premolar, I = incisor, L = left, R = right

Context	Find Number	Bones present	Age	Sex	Notes
2331	1600	L & R temporal, 5 teeth, skull frags, L & R tibia, unid frags			
2334	1601	Occipital, L & R temporal, L & R mandible, 25 teeth, skull frags, atlas, axis, 5 cervical vertebrae, L & R femur, L & R tibia, L & R fibula, L & R calcaneum, L & R talus, tarsals, metatarsals, phalanges.	>45	M	
2336	1602	Occipital, L & R parietal, skull frags		?M	
2337	1603	R temporal, skull frags,		?F	
2341	1604	5 teeth, skull frags, L femur, L & R tibia, L & R fibula, unid frags	15-21		
2346	1605	Occipital, L & R temporal, R parietal, sphenoid, L mandible I1-P3 M1-M3, R mandible I1-M3, L maxilla I1-M3, R maxilla I1-M3, atlas, axis, unid frags.	25-35	M	Slight calculus on some molars. R lower M3 deformed/dwarfed. R M3 upper, impacted. Enamel hypoplasia lines.
2350	1606	L scapula, L clavicle, L humerus, L & R femur, L & R tibia, L & R fibula, R calcaneum, tarsals, metatarsals, unid frags			
2353	1607	Occipital, L & R parietals, R temporal, R & L mandible M3, 15 teeth, atlas, axis, 2 cervical verts, ribs, L humerus, L & R ulna, L & R radius, metacarpal, L & R femur, L & R tibia.	25-35	F	
2357	1608	Occipital, L & R parietals, L & R temporals, R maxilla P4-M3, L mandible M1-M3, R mandible M2-M3,, skull frags, atlas, axis, 2 cervical vertebrae, L clavicle, ribs, L & R humerus, metacarpal frags, pelvis frags, L & R femur, L & R tibia, L & R fibula, L & R calcaneum, R talus, tarsals, metatarsals, phalanges, numerous unid frags	17-25	F	Moderate calculus on most teeth. Too many teeth 21 molars, 10 premolars, 12 I/C More than one individual represented
2359	1609	Manual phalanges, tooth, R pelvis, sacrum frags, L & R femur, L & R tibia, L fibula, L & R talus, R calcaneum, L tarsals		M	Advanced osteoarthritis, eburnation and pitting of L femoral head. L & R femurs, L tibia and L fibula show evidence of rickets

Context	Find Number	Bones present	Age	Sex	Notes
2361	1610	Mandible M2-M2, maxilla M3-M2 (only 1 incisor), occipital, L & R temporals, atlas, axis, 5 cervical verts, skull frags, L radius, L & R femur, L & R tibia, L fibula	17-25	?F	Unclear if other M3s will develop or are congenitally absent
2364	1611	L & R temporals, R mandible M1-M3, 7 other teeth, L fenur, L tibia, unid frags	15-21		M3 in crypt, Proximal tibia unfused
2367	1612	L parietal, frontal, L & R temporals, L mandible P3-M2, other teeth, skull frags	12-18		M3's present, unerupted, crowns complete
2372	1613	Unid frags			
2373	1614	R temporal, skull frags, R mandible P3-M3, 7 other teeth, unid frags	15-21		R lower M3 erupting
2374	1615	R temporal, occipital, L & R parietals, skull and tooth frags			
2375	1616	L maxilla C-M3, R maxilla M1-M3, L zygomatic, L & R sphenoid, L parietal, L & R temporal, occipital, L mandible P3-M3, other skull and tooth frags, pelvis frags, L & R femur, L & R tibia, numerous unid frags	17-25	M	Slight calculus lingual side of molars
2376	1617	R parietal, frontal, occipital, L & R temporal, R zygomatic, R sphenoid, R maxilla C-M1 M3, R mandible P4-M3, 14 teeth, skull frags, atlas, axis, L & R humerus shaft, L femur, L tibia, talus, calcaneum, tarsals, metatarsals, phalanges	25-35	?M	R mandible chopped between M3 and ascending ramus, antemortem damage.
2380	1618	L & R temporals, occipital, L & R parietals, L & R maxilla P4-M2, L mandible M1-M2, R humerus shaft, manual phalanges, L & R femur, L tibia, L & R fibula	17-25	M	Moderate calculus on molars. Indentation on interior surface of occipital
2383	1619	Occipital, L & R parietals, L & R temporals, mandible, maxilla, tooth frags, atlas, axis, L & R metacarpals & phalanges, L & R pelvis frags, L & R femur	35-45	?F	Wormian bones on lambdoidal suture. Slight calculus on most molars. Caries cavities at cemento-enamel junction.
2386	1620	R temporal, ulna shaft, L pelvis, R femur shaft, numerous unid frags			
2394	1621	Occipital, L & R temporals, R sphenoid, L maxilla M2, L mandible M1-M3, atlas, axis, numerous skull and unid frags.	35-45	?M	Excessive wear on anterior teeth, no crown left on some.
2405	1622	Occipital, L temporal, L zygomatic, L sphenoid, maxilla M3-M3, L parietal, L mandible I1-M3, R lower teeth, atlas, axis, R scapula, R humerus, L radius, L ulna.	35-45	?F	Slight calculus on most teeth
2419	1623	Unid frags			

Context	Find Number	Bones present	Age	Sex	Notes
2424	1624	R tarsals, L calcaneum, cuboid, 1st cuneiform, metatarsals, phalanges.			
2429	1625	L parietal, occipital, L & R temporal, L maxilla C-M2, L mandible C-M3, R mandible M1-M3, 8 teeth, atlas, axis, skull frags, L humerus, L ulna, R radius, carpals, metacarpals, phalanges, L & R pelvis frags, L & R femur, L & R tibia, L & R fibula, L & R calcaneum, L talus	35-45	M	Severe calculus on C and PM, moderate on other teeth. Caries cavity upper L M2 at cemento-enamel junction.
2440	1626	Occipital, teeth, skull frags		?M	
2443	1627	L & R temporals, L sphenoid, occipital, L mandible DP4- M1(erupting), 19 teeth (deciduous and permanent), skull frags	5-7		
2445	1628	Teeth, L femur, unid frags	17-25		
2460	1629	L & R temporals, L occipital condyle, L maxilla DP3-M1, L mandible DP3-M1, skull frags	5-7		
2466	1630	L & R temporals, L sphenoid, occipital, R maxilla C P3 DP4 M1 M2, R mandible C P3 DP4 M1 M2, 13 teeth, skull fragments, unid frags.	8-12		
2471	1631	Frontal, L & R parietals, L & R temporals, R sphenoid, occipital, 2 teeth, skull frags,			
2473	1632	L & R femur, L & R tibia, L & R fibula, L patella, L & R tarsals, metatarsals, phalanges.			
2479	1633	Frontal, occipital, L & R temporals, L & R sphenoid, R maxilla I1C-M2, L maxilla I1-C M1 M2, L mandible I1-M3, R mandible I1 I2 M2 M3, atlas, axis, cervical verts, skull frags.	35-45	M	Upper L M2 caries cavity cemento-enamel junction. Slight calculus on most teeth.
2482	1634	L & R femur, L & R tibia, L & R fibula, R patella, L & R calcaneum, L talus, tarsals.			Tibia GL 350mm
2485	1635	Unid frags			
2488	1636	Unid frags			
2491	1637	Occipital, L & R parietals, frontal, L & R temporals, L sphenoid, 5 molars, skull frgas, atlas, axis, L & R femur, R ulna, unid frags	35-45	M	
2495	1638	L calcaneum, L talus, unid frags			
2498	1639	Tooth frags, L & R femur and tibia shafts, numerous unid frags	> 25		
2513	1640	Left femur, unid frags			

Context	Find Number	Bones present	Age	Sex	Notes
2517	1641	Skull frags, temporal, molar (?M3)	17-25		
2520	1642	Unid frags			
2523	1643	R temporal, skull frags, 10 tooth frags	35-45		
2526	1644	Unid frags			
2528	1645	L distal radius, R occipital condyle, R petrous temporal, L mandible frags, 2 cervical verts, 6 teeth, unid frags	25-35		Same individual as 1648
2529	1646	L femur shaft , prox femur, acetabulum frag, other pelvis frags, L metacarpal frags, unid frags			
2532	1647	R temporal and occipital, maxilla + teeth, R mand + teeth, loose teeth, R prox. femur, acetabulum, unid frags	25-35	F	Moderate calculus on some teeth
2535	1648	Skull frags, L temporal, parietals and occipital, R mandible, ribs, atlas, axis, 3 cervical verts, 2 thoracic verts, L sciatic notch, ischium, numerous unid frags	25-35	F	Same individual as 1645, periodontal disease R mand, caries cavity lower molar
2538	1649	L & R tibia shafts, unid frags			
2540	1650	L & R parietals, occipital, L temporal, 2 upper molars, frag atlas, unid frags		?M	AW on teeth
2544	1651	L & R temporal, occipital, sphenoid, frontal, facial bones complete, L & R maxilla M3-I2 I1M3, L mandible M3-I1, R mandible I1-I2 P4-M3, atlas, axis, 5 cervical verts. Sacrum frag, L & R femur shafts, L tibia shaft, R calcaneum, numerous unid frags	17-25	?F	Skull complete when excavated, cranial vault lying inside brain cavity. Has frgamented somewhat post-ex.
2547	1652	L petrous temporal, 1 upper DP4, 1 lower DP4, 1 unerupted M1, unid frags	3-5		
2533	1653	L & R femur, R fibula, L tibia, unid frags			
2560	1654	L & R temporal, L sphenoid, occipital, L maxilla, L mandible, almost all teeth, atlas, axis, unid frags	17-25	F	L lower M3 congenitally absent
2562	1655	R femur, 4 R metacarpals, 2 R first phalanges, unid frags			
2565	1656	Distal femur fragment, unid frags			
2569	1657	Distal femur fragment			

Context	Find Number	Bones present	Age	Sex	Notes
2572	1658	Occipital, parietals, temporals, mandible with all teeth, maxillary teeth, skull frags, atlas, axis, 4 cervical verts, L prox humerus, pelvis frags, L & R femur, L & R prox tibia, L & R fibula,	> 45	M	L M1 worn to roots, poss abcess buccal side
2580	1659	Occipital, temporals, parietals, L mandible M1-M3, teeth, skull frags,	25-35	?F	2 individuals.Sslight calculus on molars
2580	1659	L & R ribs, L & R femur, R tibia, R calcaneum, ling bone frags.			
2592	1660	R distal ulna and radius, R metacarpals, R phalanges, R pelvis, L & R femur, L & R tibia, R fibula, unid frags			
2595	1661	L & R temporals, 10 upper teeth, skull and tooth frags	25-35	?M	
2599	1662	R parietal, Frontal, Occipital, L & R temporals, R zygomatic, R mandible frag, 10 molars, 8 premolars, 3 incisos, atlas, axis, cervical verts, skull frags	17-25	?M	
2606	1663	Unid frags			
2630	1664	occipital, L & R temporals, sphenoid, parietal frags, L maxilla M3-P3, R maxilla M1-P4, 11 other teeth, atlas, axis, 3 cervical verts, R femur.	17-25	?F	
2635	1665	Unid frags			
2638	1666	Unid frags			
2641	1667	Lumbar vertebra frags, L radius, L ulna sacrum, L & R pelvis, L femur, L tibia, L fibula		M	Ulna length 263mm
2644	1668	Unid frags			
2649	1669	6 teeth, tarsal frags, unid frags	25-35		
2679	1670	6 teeth			
2704	1671	L femur, unid frags			
2718	1672	L pelvis, unid frags			

Table 4: The disarticulated Human remains from excavations Whithorn in 1996.

Key: unid = unidentified, frag/s = fragment/s, poss = possibly, M = molar, PM = premolar, DP = deciduous premolar, I = incisor, L = left, R = right

Context	Find Number	Bones present	Age	Sex	Notes
2330	1054	Unid frags			
2330	1055	Tooth			
2319	1060	6 Teeth	10-12		
2371	1071	Frontal, L parietal, L & R temporal, L mandible I1-M2, R mandible I1-M3, skull frags, L & R femur, humerus shaft, tibia shaft, unid long bone frags, unid frags.	25-35		L M3 absent. Cow metapodial found in same bag.
2356	1078	L parietal, L & R temporal, L sphenoid, L zygomatic, L frontal, occipital, R maxilla, M1-M2, 11 teeth, skull frags, unid frags	11-14		
2385	1090	9 Teeth, temporal frag	17-25		
2407	1098	Unid frags			
2402	1102	L tibia			
2414	1105	Unid frags			
2418	1108	Unid frags			
2449	1133	Tooth, R temporal			
2458	1134	Unid frags			
2492	1153	R femur			
2492	1154	Two individuals, R maxilla, DP4-M1 (I1,I2,P3,P4 in crypt), R maxilla P4-M2, 2R, 1L temporal, frontal, R zygomatic (both young), skull frags., unid frags.			1) 6-8 yrs, frontal may belong to this individual. 2) 25-35
2478	1155	R maxilla, P3 DP4 M1, other teeth, temporal frags, unid frags	8-12		
2492	1158	Poss two individuals.			1) 15-21. 2) older
2492	1159	Femur shaft			
2492	1160	L femur			
2492	1161	9 teeth	6-8		age tentative

Context	Find Number	Bones present	Age	Sex	Notes
2478	1174	Tooth, unid frags			
2497	1176	Unid frags			
2509	1178	Unid frags			
2333	1199	Skull frags			
2531	1200	Calcaneum frag, 6 teeth	17-25		
2531	1202	R maxilla M1-M3, 11 teeth, R & L temporal, R parital, frontal, occipital, unid skull frags	15-21		M3 erupting
2519	1204	Tooth			
2362	1205	Unid frags			
2537	1206	Unid frags			
2551	1211	R femur distal epiphysis unfused, unid frags	<20		
2556	1213	8 tooth frags			
2561	1220	R tibia shaft			
2437	1227	Unid frags			
2437	1228	12 teeth	17-25		
2379	1230	L femur			
2522	1235	Unid frags			
2580	1242	12 teeth, unid frags			
2549	1261	Femur shaft, unid frags			
2556	1263	L mandible M1, R mandible P3, 7 teeth, pelvis frags, scapula, humerus, femur, unid frags	25-35		
2613	1268	Unid frags			
2579	1269	Unid frags			
2579	1290	Pelvis frags			
2492	1293	L femur			
2492	1296	Unid frags			

Context	Find Number	Bones present	Age	Sex	Notes
2492	1300	Sphenoid, L & R temporal, 32 teeth (some deciduous) skull frags	9-13		
2632	1310	Unid frags			
2492	1322	2 teeth			
2492	1324	Unid frags			
2635	1329	3 teeth	17-25		
2492	1331	Unid frags			
2492	1335	Unid frags			
2492	1345	7 teeth			
2646	1351	Unid frags			
2492	1354	Unid frags			
2492	1355	Unid fraga			
2653	1366	2 teeth			
2492	1378	Unid frags			
2492	1380	Unid frags			
2492	1384	Unid frags			
2492	1388	Tooth			
2653	1408	Unid frags			
2677	1411	Unid frags			
2707	1453	Tooth frags			
2692	1454	Unid frags			
2653	1460	Unid frags			
2709	1481	Tooth			
2709	1483	Unid frags			
2709	1492	Tooth			
2719	1506	2 teeth			
2752	1525	Tooth frags			

