

A5.1.0 Introduction

Ham Hill is probably the largest Hillfort in southern Britain. It covers 84ha of a 125m limestone and Yeovil Sand escarpment surrounded by multivallate ramparts and appears to have encompassed both areas of nucleated settlement and field systems. The interior was reused in the Romano-British period, with a corridor type villa in the southeast of the interior (Walter 1907) and field system (Leach 1978) and has been quarried for Ham stone since the Roman period. Quarrying has influenced the study of the hill to a great extent. The most obviously defended North Spur has had almost its entire internal area removed by 19th and early 20th Century quarrying, and quarries are still in operation in other areas within the rampart circuit. As St George Gray (1910:50-51) commented,

'it is much to be deplored that commercial enterprise has been gradually playing havoc with the earthworks of this, one of the largest and most important strongholds of early man in the kingdom'.

The rest of the area has been ploughed (Smith 1990:27). Excavation has been limited to opportunistic collecting of stray finds by Norris and Walter from areas exposed by quarrying (St George Gray 1910:50), rescue excavations commencing with a number of small trenches excavated by St George Gray between 1923 and 1930, and various watching briefs, small trenches and slightly larger investigations carried out in more recent years under PPG16. The difficulty with the animal bone is that, not only is there little for the area of the hillfort, but much of it was subject to limited recording. A summary of collecting and excavation activity is provided in Table 5.1 and the location of modern trenches in Figure 5.1. Given the size of the hill, these cannot be regarded as representative of the whole and it is self evident that there are radically different activity areas within the ramparts.

Table 5.1: Ham Hill investigations

Location	Date	By	Type	Findings	Reference
Unknown	1901	Walter	Stray	Animal bone and other finds	St George Gray 1910
Unknown	1904	Unknown	Stray	Animal bone and other finds	St George Gray 1910
Unknown	1907	Unknown	Stray	Stray finds	St George Gray 1910
Unknown	1911	Unknown	Stray	Animal bone	Not published
Unknown	1919	Unknown	Stray	Animal bone	Not published
Cutting I-VIII Lower slope NW North Spur	1923	St George Gray	Exc	Nothing! Designed to test location of possible RB cemetery	St George Gray 1924:108
Cutting IX Ham Turn	1923	St George Gray	Exc	Cut through rampart, subsequent constructions with hearths	St George Gray 1926:57
Cutting X Ham Turn	1923	St George Gray	Exc	Cut through rampart	St George Gray 1926:
Cutting XI East Valley Between ramparts	1923, 1925	St George Gray	Exc	Numerous RB finds	St George Gray 1924
Cutting XII East Valley ?Entrance	1923, 1925	St George Gray	Exc	A few RB objects from top 1ft, from description all LIA lower down	St George Gray 1924

Cutting XIII Ham Turn	1925 1926	St George Gray	Exc	Cut through rampart.	St George Gray 1926
Cutting XIV North Spur fortification	1925	St George Gray	Exc	Rampart Ditch. Skeleton crouched on lower silt under RB material	St George Gray 1925:58-61; 1926:56
Cutting XIV North Spur fortification	1929	St George Gray	Exc	Rampart	Not published
Cutting XV (unknown)	1929	St George Gray	Exc		Not published
Cutting XVII (unknown)	1930	St George Gray	Exc	Located at least IA pits	Not published
Cutting XVIII (unknown)	1930	St George Gray	Exc		Not published
Cutting XIX (unknown)	1930	St George Gray	Exc		Not published
Unknown	1930	Trask	Exc?	Animal bone	Not published
Unknown	1949	Seaby	Exc?	Animal bone	Not published
Within North Spur	1975	Pearson	WB	V shaped rampart ditch exposed. Pottery collected	Ellison and Pearson 1977
SE Interior	1983	Central Excavation Unit	Exc	Four round vertical sided pits and arc of postholes. MIA pot	Smith 1990
SE Interior	1991	Adkins and Adkins	Exc	Two pits. SWDW pottery. 2 nd C BC	Adkins and Adkins 1991
SE Interior	1994	Wessex Archaeology	Exc	Pits EIA-LIA. Field ditches, undated but respected. Animal bone all from pits.	McKinley 1999
SE Interior	1998	Wessex Archaeology	Exc	Adjoining 1994 trench on east side. Ditches extending system. Single sherd of IA pot in one.	McKinley 1999
SE Interior	2002	Wessex Archaeology	Exc	MIA-LIA Pits, ring ditch, two ditches at right angles. Probable field boundaries, producing M-LIA pottery. Animal bone mainly from pits, 2 nd -1 st C BC.	Lievers <i>et al</i> 2006; Knight 2005; 2006:51

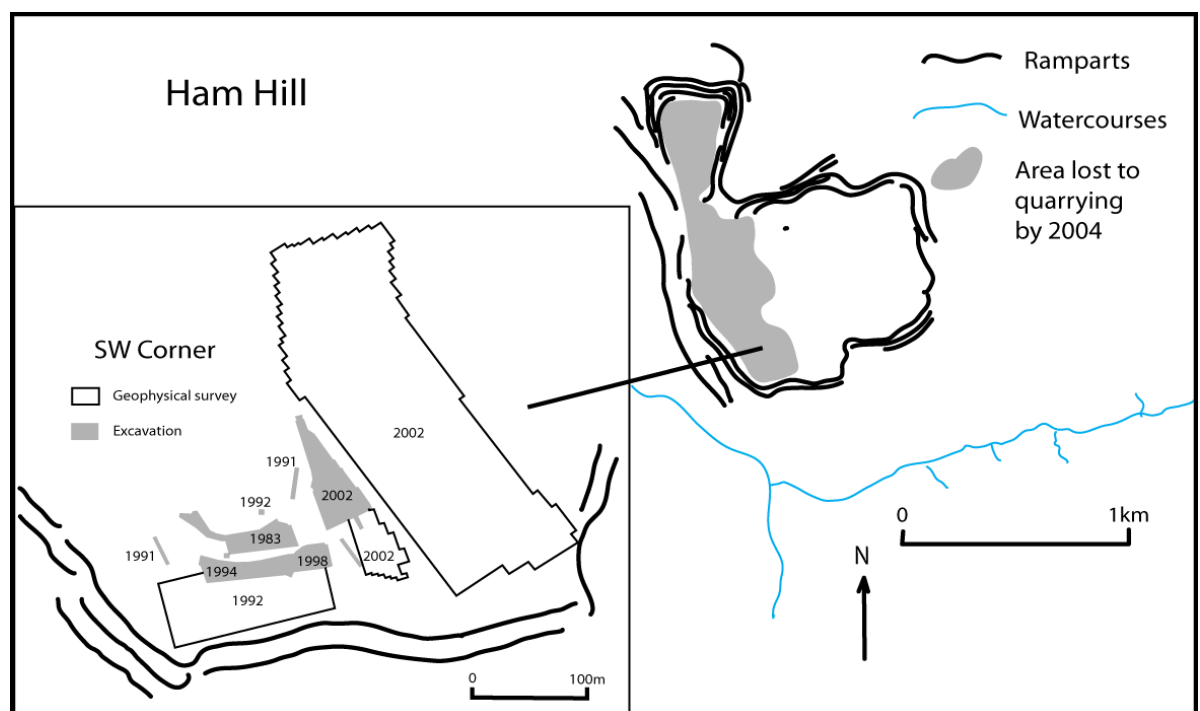


Figure 5.1: Ham Hill, Somerset, location of investigations and known archaeological features (After Lievers *et al* 2002:41).

A5.2.0 Methods

Some material from Ham Hill has been previously examined by a variety of analysts. Some of these have been fully published, whilst others exist as grey literature. Other material has not been examined in recent years and has been examined by the author. The methods used in the analysis of these assemblages are detailed in Appendix 1. This document seeks to collate these various assemblages into a more coherent summary.

A5.3.0 General Observations

Material retained from early excavations by St George Gray is generally in excellent condition, but it is evident that he collected and retained only entire or nearly entire specimens. This is similar to collection policies at Glastonbury and Meare. (Coles and Minnit 1995). However there are a range of species represented and this material provides a counterpoint to other excavated material recovered later in the 20th Century, and represents the only animal bone that we have available from the most heavily quarried (and arguably original) spur of the hillfort. There was also a notable amount of disarticulated human remains, both identified originally, and within the faunal collection. Material from the more recent excavations is highly fragmented and indicates that it is likely that as a general principle the treatment of animal remains within the hillfort involved the high degree of processing that can be seen in other Iron Age assemblages in the area. The lack of fragmentary material in the earlier assemblages is evidently the result of the retention policy.

A5.4.0 Cutting IX

Finds below the Roman and later layers on the rampart bank included, two pieces of worked red deer antler and a clay spindle whorl (St George Gray 1926:58). No further animal bone was retained in the collection.

A5.5.0 Cutting X

Material from the Iron Age layers of the rampart bank included several combs and numerous spindle whorls (St George Gray 1926:60). 18 fragments from Layers 4-6, apparently M-LIA, were retained (Table 5.22), and given the inclusion of less identifiable material, may not have been 'selected' by St George Gray. Layer 5 also contained disarticulated human remains.

Table 5.2: Material from apparently Iron Age contexts in Cutting X

Species	NISP
Cattle	3
Sheep/Goat	1
Pig	3
Horse	2
Domestic Fowl	1
Large mammal	6
Medium mammal	1
Total	17

A5.6.0 Cutting XI

This produced a small collection of animal bone, but given the large number of Romano - British finds may be later and is not considered here.

A5.7.0 Cutting XII

'The most interesting of the animal remains were one metacarpus and two metatarsi of Ox (adult) giving estimated height of animal 3ft 2¼ ins and 3ft 4¾ ins (average 3ft 3½ ins). The small Kerry Cow of to-day measures in height at shoulder about 3ft 5ins' (St George Gray 1924:116). These are preserved in the collection and have been re-measured in Table 5.3:

Table 5.3: Metrical data from Cutting XII.

Element	Bd	Bdf	Bp	Ddf	Dp	GL	SD
Metacarpal	54.4	47.5	51.7	25.2	31.6	181.4	29.1
Metatarsal	46.8	44.1	41.1	25.7	38.7	203.6	22.7
Metatarsal	47.8	42.9	41.2	25.7	40	203.3	22.2

The metacarpal falls within the range expected for a cow. A cattle-size mammal rib with a heavy cut across the shaft (one of the metatarsals also displayed cuts) was retained along with two lower male pig canines.

A5.8.0 Cutting XIII

A number of worked bone implements were recovered from the Iron Age (Layer 4-6) bank material, along with a reaping hook and several quern fragments and spindle whorls (St George Gray 1926:61-67). The material retained appears to be highly selective as shown in Table 5.4. The two large mammal ribs display cut marks, and many of the other bones are entire or unusual.

Table 5.4: Material from Iron Age contexts in Cutting XIII. NB three of the horse elements articulate

Species	NISP
Cattle	1
Sheep/Goat	1
Horse	6
Bird	2
Fox	1
Red deer	1
Large mammal	2
Unidentified	1
Total	15

'A tarsus of horse, length 245mm, found in the Roman deposits, gave a stature of 12 hands 1 in; a carpus of horse, found in layer 6, gave a stature of 12 hands ½ in; and a carpus of ox, length 185m, also found in Layer 6, represented an animal 3ft 5 ½ in at the shoulder' (St George Gray 1926:67).

Measurements were obtained from a number of elements as shown in Table 5.5.

Table 5.5: Metrics, Cutting XIII.

Element							
Cattle MTA	Bd = 54.0	Bdf=50.5	Bp=52.9	Ddf= 25.9	Dp =31.5	GL=185.3	SD=30
Horse MCA	Bd= 43.9	Bdf= 41.9	Bp=45	Ddf=27.9	Dp =28.5	GL=199.6	SD=29.8
Horse MTA	Bd=51.4	Bdf=52	Bp=56.5	Ddf=33	Dp=43.6	GL=288.5	
Horse Tibia	Bd=78.4	Bp=99.5	Dd=48.3	GL=357.7	SD=43.5		
S/G Radius	Bd=26	Bp=27.1	Bpf=24.5	Ddf=17.2	Dp=14.1	GL=135.3	SD=14.5

The associated group of horse bones consist of a first, second and third phalanx.

A5.9.0 Cutting XIV

'Animal remains were not plentiful. An ox's skull (without lower jaw) was found in poor condition on the bottom of the fosse; also a boar's tusk. In the same position the lower jaw of a dog of the size of a black retriever, 2ft 2ins at shoulder' (St George Gray 1925:64). The latter item remains in the collection, along with the male pig canine and a horse patella. However most of the material appears to have been disposed of as the following were not in the collection: *'A few inches below the skeleton a pig jaw and two sheep jaws were noted'* (St George Gray 1925:65). Also retained was a single whole pig metatarsal and two lower canines, both male.

A5.10.0 Cutting XV

Only two fragments were retained and from the information with them were apparently from surface layers, and have not been considered further.

A5.11.0 Cutting XVII

A fair collection was retained from this trench, but in the absence of information on where much of it came from, the contents of two pits are presented here (Table 5.6). Some selection may have occurred.

Table 5.6: Material retained from Cutting XVII pits.

Species	Pit 1		Pit 5
	NISP	MNI	NISP
Cattle	3	2	
Sheep/goat	11	3	2
Total	14		2

Two of the three cattle fragments were porous; one, had an unfused acetabulum. Eight of the sheep/goat fragments from Pit 1 were porous, with a humerus, femur and tibia (neonate size) unfused proximally and distally, and a distally unfused metatarsal. Two mandibles had MWS of 1, one at Payne Stage A, one at Stage B. It is possible that this material may represent at least one associated bone group.

Three elements were measurable, as shown in Table 5.7.

Table 5.7: Metrics for Cutting XVII pits.

Element						
Cattle horn	Bd=59.5	Dd=36.4				
Goat horn	Bd=38.7	Dd=23.7	LOC=160.6			
S/G MCA	Bd=21.3	Bp=19.3	Dd=11.9	Dp=13.9	GL=117.8	SD=11

A5.12.0 Cutting XVIII

Very little bone was retained from this trench, with no context data, and is therefore not considered here.

A5.13.0 Cutting XIX

A number of pits were excavated, and it is highly likely that these were Iron Age, despite the lack of records. As this material was never published the information on provenance relies on the information included with the animal bone itself (Table 5.8).

Table 5.8: Material retained from Cutting XIX pits.

Species	NISP
Cattle	15
Sheep/Goat	28
Pig	10
Dog	1
Horse	3
Large mammal	2
Total	59

Given the number of age-able mandibles present in this small collection, the selective retention policy by St George Gray is emphasised. A cattle mandible was the only porous bone and gave a MWS of 1. At least one fully adult animal was represented in a proximally and distally fused metacarpal. None of the pig bone was porous, but two mandibles gave MWS of 17 and 19. Two fragments of sheep/goat bone were porous, and there were both fully fused and unfused tibiae and metapodials. The sheep/goat mandibles (Figure 5.2) indicate the full spread of age groups, from neonates to elderly individuals, but the sample is too small to infer anything as to the culling strategy.

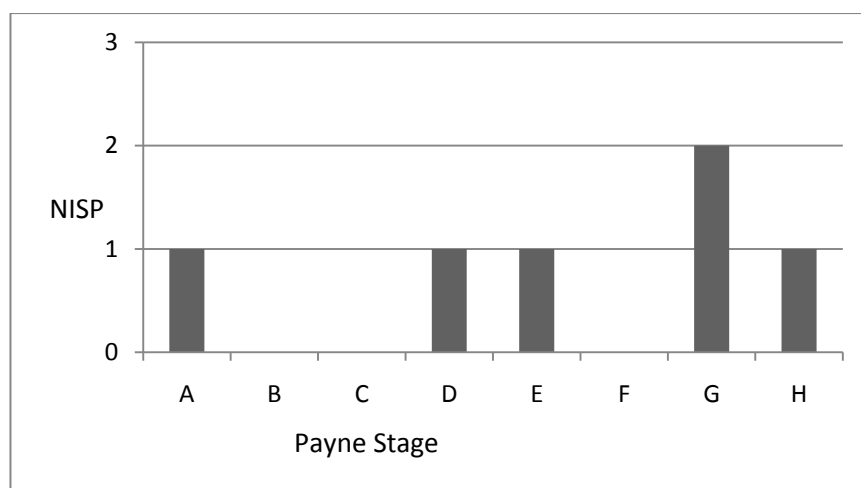


Figure 5.2: Payne stages for sheep/goat mandibles retained from Cutting XIX. N=6

Three loose pig lower canines were from males. An entire raven ABG was recovered from the base of Pit 12.

A5.14.0 Excavations in 1983, 1991, 1994, 2002

A small excavation in 1983 produced material from six Middle Iron Age pits (Table 5.9). The spread of material between the pits was not even, with one in particular pit containing half of the identified fragments. Excavations in 1991, 1994 (an adjoining trench in 1998 provided no animal bone), and 2002 were carried out in much more controlled circumstances and clustered in one area of the south western corner of the hillfort interior. Material came from a variety of features, some of which have been separated between the Middle and Late Iron Age, but elsewhere treated as later Iron Age. The assemblages are separately small but become more meaningful when considered together.

Table 5.9: Species representation 1983-2002. NB NISPs for 2002 appear to contain ABGs. *Many of the LMA fragments came from the same context where many of the horse bones were recovered.

Species	1983 NISP (Meddens u.d.)	1991 (Author)		1994 NISP (Hamilton- Dyer 1999)				2002 NISP (Knight 2005)	Combined Main	Combined Main %
	MIA	M- LIA NISP	M- LIA MNI	EIA	MIA	LIA	IA	M-LIA	M-LIA	M-LIA
Cattle	10	34	3	8	20	9	9	19	92	21.00%
Sheep/goat	35	102	3	1	52	21	10	117	337	76.94%
Pig	5	7	1	1	3	10	2	12	39	2.06%
Horse	4	24	2		6	15		30	79	
Dog		1	1		5	1		1	8	
Deer		1		1					1	
Raven								1	1	
Large Mammal	22	132*		14	26	5	4		189	
Medium Mammal	80	51		1	58	8	7		204	
Unidentified	9	104			45	1		454	509	
Total fragments	135	456		26	215	70	32	634	1459	

A5.14.1 Species representation

The overall species representation for the Iron Age in the 1983 and 1994 material favoured sheep/goat with cattle and pig in smaller proportions (Figure 5.3; Hamilton-Dyer 1999:126; Meddens u.d.). A single goat bone was positively identified in the 1983 material (Meddens u.d.). This reflects the proportions from the 1991 material. Sheep/goat was also the most common species in the material excavated in 2002. However, this produced an unusual representation of horse remains, although this may have been influenced by the fact that much of the material came from pits (Knight 2006:51-2). There were small amounts of cattle and pig and only single examples of dog and bird. This restricted range of species seems to be reflected in the earlier material from the hillfort (there is little evidence of wild species), and the composition of the Cadbury Castle and surrounding assemblages.

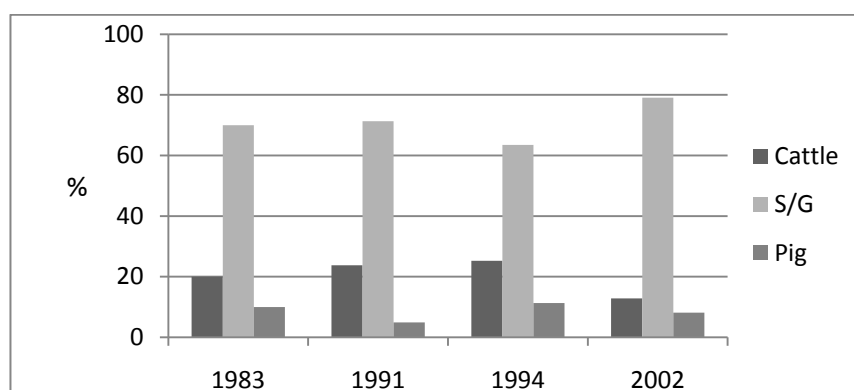


Figure 5.3: Percentage of cattle, sheep/goat and pig. Ham Hill 1983 Total N = 50, 1991 Total N=143, 1994 Total N=115, 2002 Total N=148.

A5.14.2 Cattle

Cattle bone from the 1994 excavations was largely represented by loose teeth, skull fragments and heavily fragmented limb bones (Hamilton-Dyer 1999:127). A neonatal, two immature and one adult individual were represented in the material excavated in 2002 (Knight 2006:52). Two mandibles from the 1991 material provided MWS of 11 and 39 respectively; where present all epiphyses were fused, but there were three porous fragments. This at least implies the presence of animals that could feasibly come from a productive herd. One third of the 2002 material displayed cut marks, probably due to the necessity of butchering the larger sized animal (Knight 2006:52). There were only three cut marks on cattle bone in the 1991 material.

A5.14.3 Pig

Pig bone from the 1994 excavations was largely represented by loose teeth, skull fragments and heavily fragmented limb bones (Hamilton-Dyer 1999:127). Two of seven pig fragments in the 1991 material were porous. An immature and an adult pig were represented in the 2002 material; a single pig bone displayed a cut mark (Knight 2006:52). The apparently greater

representation of juvenile individuals is unsurprising and reflects the age profile of pigs in the same period at Cadbury Castle.

A5.14.4 Sheep/Goat

There is unfortunately little ageing information from any of these assemblages. No porous material was noted in the material from the 1983 trench, with three fused elements and one unfused one noted amongst the sheep/goat. A single sheep/goat mandible had a MWS of 47 (Payne Stage I). No mandibles from the 1991 material provided ages, and there was no porous bone present. Combined data from 1983 and St George Gray's excavations are shown in Figure 5.4. Almost all of the epiphyses present were fused with the exception of a single distal metacarpal. A single sheep tibia from the 1994 material provided a withers height of 587mm (Hamilton-Dyer 1999:127). The range of withers heights in the 2002 material was 493-598mm. A range of ages from neonate to senile were present, suggesting breeding and wool production (Knight 2006:52). Less than 10% of sheep/goat bones displayed cut marks (Knight 2006:3).

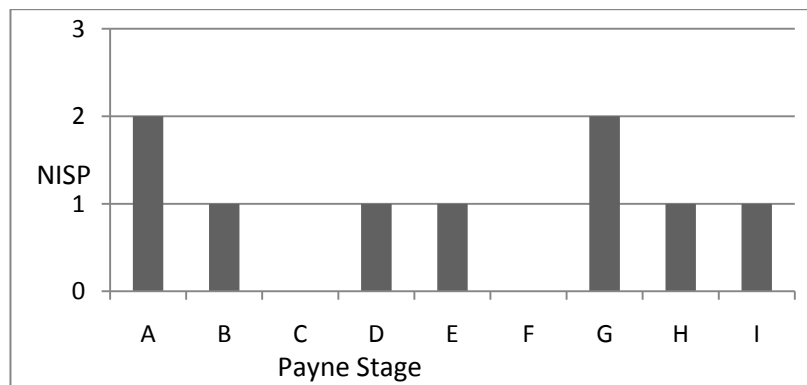


Figure 5.4: Payne stages for sheep/goat mandibles, Ham Hill, Middle-Late Iron Age. This data is combined from material that may have been retained selectively from two St George Gray excavations and one mandible (scoring Payne Stage I) from the 1983 excavation. N = 9.

A5.14.5 Dog

The handful of dog fragments from the 1994 excavation was complimented by a single dog coprolite (Hamilton-Dyer 1999:127). A single dog bone fragment came from each of the 1991 and 2002 excavations.

A5.14.6 Horse

Most of the horse remains from the 1994 excavations were teeth or jaw fragments. A range of age groups are represented including an animal under 18 months of age at death (Hamilton-Dyer 1999:127). The horse remains recovered from the 2002 excavations were of a wide range of age groups ranging from 2 years to over 15. There were no neonatal or very young animals (Knight 2006:52). Skeletally adult horses predominate in the 1991 material although there are two vertebral bodies with unfused epiphyses. A number of butchered fragments were noted in

the 1983 material, including on two horse lumbar vertebrae which also had changes consistent with spinal degenerative disease.

A5.14.7 Wild Species

The single fragment of deer bone from the 1994 excavations was a fragment of cut red deer antler (Hamilton-Dyer 1999:127). The single fragment of antler in the 1991 assemblage was roe deer. An antler 'weaving comb' was recovered from Pit 108 of the 2002 excavations (Leivers *et al* 2006:49). A single raven bone occurred in the same pit (Knight 2005).

A5.14.8 Animal bone groups and complete skulls

A partial carcase of a lamb, c 2 weeks of age, was recovered from a Late Iron Age pit in the 1994 excavations (Hamilton-Dyer 1999:126). The skulls of seven horses were recovered from one LIA pit (containing SWDW and Poole Harbour Ware types of pottery) excavated in 2002 (Leivers *et al* 2006:43). This pit had a single fill and also contained an iron billhook, two querns and three slingshots. *'The absence of post-cranial elements indicates a deliberate and very probably ceremonial selection'* (Leivers *et al* 2006:43). Pit 180 also produced a horses head, whilst a horse head, quern stone and pile of burned Hamstone occurred in pit 149. The mandibles may have been deliberately removed given their absence but the presence of the teeth in the maxilla (Knight 2006:52). Knight (2005) comments in the unpublished version of her report that *'One explanation could be that these parts were brought into the site as spoils or even commemorations of battles where horses had been killed, which could account for the prime age of many of the animals. The 2-3 year olds are less easy to explain, if tooth wear is accurate, which of course depends on the breed and diet of individual animals'*. Pit 108 contained 25 sheep/goat vertebrae which had probably been deposited in articulation with the ribs, possibly after butchery. This pit also contained large quantities of burnt Hamstone , an iron sickle, two quernstones inverted, the best part of a SWDW vessel and large quantities of charred spelt, emmer, hulled barley and copious black mustard seeds. Deliberately burnt crops also occurred in pit 149 (Leivers *et al* 2006:44).

A5.15.0 Discussion

Although the datasets are small, and much material cannot provide great detail, the combination of the recently excavated material, and comparison to the more biased and smaller collections from earlier investigations indicates a faunal economy heavily dominated by sheep/goat with cattle a junior partner and pigs of apparently much less importance. In general terms wild species are rare, which agrees well with the Cadbury Castle and SCEP data. It is however, not possible to speculate on any similarities or differences in the aims or strategies employed at Ham Hill in comparison to Cadbury Castle due to the limitations of the ageing information available. However, there appears to be a slightly greater interest in horses. This appears to be a recurrent factor in the recent excavations, indicating that the practice of depositing horses covered a fair area of the part of the hillfort that has received modern examination. The number of complete horse bones recovered from the earlier St George Gray investigations chimes with this. This is discussed further below.

Where information is available from the more recent excavations, it appears that these are heavily fragmented and utilised assemblages. Where recorded, the proportions of unidentified fragments and loose teeth are high, which is also similar to the Cadbury Castle and surrounding assemblages. There is evidence of cut marks, with a slight bias to cattle as the larger species. These are generally light cuts in keeping with the butchery methods seen in other assemblages in the area. Most of this material is therefore likely to be the result of domestic discard.

Other finds from Ham Hill attest to the presence and use of animals, although many of these were stray finds. Numerous worked antler objects were retained, along with horse bit fragments and other harness parts, loom-weights and spindle whorls, and at least one comb (St George Gray 1910:60). These finds indicate the range of activities including use of horses for riding and traction and the probable production of textiles. A Late Iron Age bronze cattle head complete with impressive horns provides a rare example of cattle in art (St George Gray 1910:57-8).

Depositional variability between pits was noted by Knight (2005) in regard to the most extensive assemblage, the 2002 material. Some pits contained larger quantities of material, a greater range of species and more ABGs. This type of distribution is reminiscent of that at Cadbury Castle and in particular that shown for the pits at Sigwells (Randall 2006). However, there are not sufficient data to examine this at present. On the other hand, a number of ABGs and skull deposits have been identified in recent excavations, and in earlier investigations. These are summarised in Table 5.10.

Table 5.10: Ham Hill ABGs (Iron Age or probably Iron Age)

Location	Species	Feature	Comment
Cutting XIII	Horse	Rampart	Articulated foot
Cutting XVII	Sheep/goat	Pit	At least one neonatal sheep partial carcase
Cutting XIX	Raven	Pit base	Entire raven in good condition
1994	Sheep/goat	Pit	Partial carcase of a lamb c 2 months old
2002	Sheep/goat	Pit	Articulated thorax, quernstones, deliberately burned mustard seeds, sickle
2002	Horse	Pit	Single horse skull
2002	Horse	Pit	Single horse skull, quernstone, burned stone
2002	Horse	Pit	Seven horse skulls, quernstone, slingstones, billhook

It may be that more extensive excavation would locate more deposition of cattle skulls, but at present there appears to be a concentration, at least in this area of the interior, on horse skulls. Cattle at present are not represented and this may indicate a different set of associations being expressed at Ham Hill by comparison with those at Cadbury Castle. The increased importance of horses in general is reflected in the disarticulated material and the number of whole horse elements retained from earlier excavations that may be a reflection of reduced fragmentation and different treatment of horse remains, as suggested for some of the SCEP sites.