

# Investigation of the Faunal Remains from the Excavation of Two Features Beneath the Glenwood Quarters, Kanawha County, West Virginia

by

**Flora Church**

## INTRODUCTION

Cultural Resource Analysts, Inc. of Hurricane, West Virginia was contracted to analyze an assemblage of historic artifacts recovered beneath the floor of the Glenwood Quarters in Kanawha County, West Virginia. Glenwood was constructed between 1850 and 1852 for James Madison Laidley. George W. Summers purchased Glenwood in 1857, and his descendants lived in the house until the 1970s. The artifact assemblage was collected from two features identified during renovations of the Glenwood Quarters. The assemblage primarily consisted of mid-nineteenth century ceramics and animal bone. Based on the age of the ceramic assemblage, the deposits date from the mid-nineteenth century utilization of the building as a kitchen and slave quarter.

The investigation of the faunal remains was undertaken in order to provide insights into the diet of the historic period occupants of this site. This goal was achieved primarily through taxonomic identification of the faunal remains and the analysis of taphonomic processes affecting the assemblage. In the following sections, a description of methods is followed by the results of the analysis and a summary interpretation of the faunal assemblage for each site.

## METHODS

Faunal material was recovered from cultural features during excavation using .25 inch fine-mesh screening and hand-picking. Faunal material was placed in plastic bags

by excavation lot, and each sample was labeled by site provenience.

The first step in the analysis was the identification of each faunal specimen to the lowest possible taxonomic level. This step began with sorting each excavation lot into general categories of material-- such as specimens containing identifiable landmarks, or unidentifiable long bone fragments, flat bone fragments, and compact bone fragments. Unidentifiable specimens were also sorted into burned and unburned groups.

Identification to taxonomic level began with class and skeletal element. Where identification was not possible, specimens were described as "Unidentifiable." At other times, specimens could be identified to class based on bone morphology, but the skeletal element was unrecognizable or could only be determined to general form, as noted above in the general sorting categories of long bone fragments, etc. These general groups were refined by assignment to class where possible, e.g., Mammal long bone, Bird long bone, etc. Identifications were made to the generic or species level whenever possible. Identifications were made by comparison with modern specimens and with the aid of reference texts (Eddy and Hodson 1982; Gilbert 1980; Gilbert, Martin, and Savage 1981; Hillson 1986; Klein and Cruz-Urbe 1984; Olsen 1980, 1968; Schmid 1972; and Sisson 1953). Taxonomic nomenclature was adapted from these references.

All specimens were counted and weighed. Age and sex criteria were recorded whenever possible. Aging may be

accomplished by dentition (presence of deciduous or permanent teeth; wear of teeth) or bone fusion (Reitz and Wing 1999). Sex criteria were recorded whenever these could be identified. Taphonomic modifications to skeletal elements, such as cutmarks, burning, and gnawing also were recorded.

Measures of relative abundance were constructed which included the number of identified specimens (NISP) by taxa (identified to at least the class level), the weight of identified specimens per taxon, and the minimum number of individuals (MNI). MNI was estimated for the lowest

possible taxonomic level and was established by counting the maximum number of right or left skeletal elements for each taxon and taking into account such factors as age, body size, and archaeological context (Purdue et al. 1989; Reitz and Wing 1999; White 1953).

## RESULTS

The analysis of faunal remains from archaeological investigations at Glenwood documented a total of 531 faunal specimens (Table 1). The results of the analysis are described below.

<b>Table 1. Glenwood Faunal Summary by Taxa and NISP.</b>				
<b>Taxon</b>	<b>NISP</b>	<b>Weight (g)</b>	<b>Burned (n)</b>	<b>Modified (n)</b>
<b>Aves</b>				
Anatidae	4	4.95	--	--
cf. Anatidae	1	2.68	--	1
Columbidae	1	1.52	--	--
<i>Gallus gallus</i>	43	142.8	--	15
cf. <i>Gallus gallus</i>	6	8.55	--	2
<i>Meleagris gallopavo</i>	7	64.45	--	5
Aves (Large)	34	59.27	5	13
Aves (Medium)	2	1.27	--	--
<b>Mammalia</b>				
<i>Bos taurus</i>	34	930.92	--	30
cf. <i>Bos taurus</i>	1	2.93	--	--
<i>Didelphis virginiana</i>	4	8.8	--	--
Ovis/Capra	6	100.78	1	3
cf. <i>Ovis</i> sp.	1	13.85	--	1
cf. Ovis/Capra	1	8.18	--	1
Rodentia	3	1.24	--	--
<i>Sus scrofa</i>	132	1524.60	3	60
cf. <i>Sus scrofa</i>	47	250.15	8	26
<i>Sylvilagus floridanus</i>	3	6.3	--	--
Mammal (Very Large)	21	462.85	1	18
Mammal (Large)	165	891.14	23	78
Mammal (Medium)	6	27.33	--	--
<b>Osteichthyes</b>				
<i>Ictalurus punctatus</i>	1	.51	--	--
Osteichthyes (Large)	1	.56	--	--
<b>Vertebrata</b>				
Unidentified Vertebrate	7	2.31	--	--
<b>Total</b>	<b>531</b>	<b>4517.94</b>	<b>41</b>	<b>253</b>

At least four birds, six mammals, and one fish were identified to the level of family or genus. Mammals account for over three-quarters (79.8 percent) of the assemblage, followed by birds at slightly less than one-fifth of all specimens (18.5 percent). Fish and unknown vertebrate material make up less than 2 percent. In order of prominence, identified genera/species include swine and probable swine (33.7 percent), domestic chicken and probable chicken (9.2 percent), and cattle and probable cattle (6.6 percent). Other identified genera/species consist of duck, dove/pigeon, domestic turkey, sheep/goat, opossum, rodent, Eastern cottontail rabbit, and catfish. The faunal assemblage from this site is described below by class.

#### *Avian*

**Anatidae.** Four specimens with a weight of 4.95 g were assigned to this family of birds which includes ducks, geese, and swans. The specimens consisted of one right and one left complete coracoid, one

complete left scapula, and one nearly complete right scapula. MNI = one individual. In addition, one nearly complete left humerus was tentatively identified to this family. Based on size, the material most likely represents a duck. The humerus had been gnawed by rodents.

**Columbidae.** A single specimen was identified to the family of birds consisting of doves and pigeons. This specimen was a complete sternum weighing 1.52 g. MNI = one individual. Based on morphology, the specimen was not mourning dove and may represent a common pigeon.

***Gallus gallus.*** Domestic chicken remains consisted of 43 specimens with a weight of 142.8 g (Table 2). MNI = 10 individuals, based on the left humerus. Based on the presence or absence of a metatarsal spur, at least three adult roosters and two adult hens are represented by the remains. In addition, at least four poult were present, based on the size and texture of the humerus shafts. Modifications consisted of rodent gnawing.

**Table 2. Summary of *Gallus gallus* Specimens.**

Specimen	NISP	Weight (g)	Modified (n)
Left carpometacarpus fragment	3	6.79	2
Left complete coracoid	1	1.33	--
Left complete humerus	4	12.61	--
Left humerus shaft	6	7.36	2
Left pelvis fragment	1	1.64	--
Left tarsometatarsus	3	10.06	--
Left distal tarsometatarsus	2	17.16	--
Left tibiotarsus shaft	1	5.94	1
Left distal tibiotarsus shaft	1	1.53	--
Left ulna	1	2.52	--
Right carpometacarpus fragment	3	5.37	2
Right complete coracoid	1	2.09	--
Right complete femur	1	5.05	1
Right complete humerus	2	6.41	--
Right humerus shaft	2	4.55	2
Right proximal humerus	1	2.34	--
Right tarsometatarsus	3	19.73	1
Right tarsometatarsus shaft	2	15.06	2
Right tibiotarsus shaft	2	7.51	1
Right ulna	1	2.04	--
Manubrium sterni	1	2.1	--
Occiput fragment	1	3.61	1

Additionally, six specimens were tentatively assigned to this species. These specimens consisted of one left femur shaft, one right femur shaft, one left radius, one right radius, and one crista sterni fragment. The femur shafts had been gnawed by rodents.

*Meleagris gallopavo*. The domestic turkey is represented by seven specimens with a weight of 64.45 g (Table 1). Specimens identified in the assemblage from Glenwood include one complete left humerus shaft, one left proximal radius, one left tibiotarsus shaft, one left distal tibiotarsus, one left ulna shaft, one right humerus, and one right proximal radius. MNI = 2 individuals,

based on the left tibiotarsus. Five specimens exhibited evidence of rodent gnawing.

Unidentified Avian. An additional 36 specimens (Tables 1 and 3) were classified as unidentified large (NISP = 34) and unidentified medium (NISP = 2) bird, weighing 59.27 g and 1.27 g, respectively. This material lacked sufficient identifying markers to assign to family or genus. As described above, at least one duck, a dove/pigeon, and two galliforms were identified in the assemblage. Five long bone fragments—probably fragments of the same element—were burned, while 13 specimens were rodent gnawed.

**Table 3. Summary of Unidentified Avian Material.**

Unidentified Large Bird	NISP	Weight (g)	Burned (n)	Modified (n)
Compact bone fragment	1	1.07		
Femur shaft	1	1.27		1
Humerus shaft	3	2.69		3
Long bone shaft	5	6.85		4
Long bone fragment	10	21.53	5	
Distal tarsometatarsus	2	1.48		
Left scapula blade portion	1	0.49		
Left tarsometatarsus shaft	3	10.7		2
Left ulna shaft	1	1.58		
Right radius shaft	1	1.3		1
Right scapula	3	2.43		
Right tarsometatarsus shaft	1	2.62		1
Right distal tibiotarsus	1	4.32		1
Fused thoracic vertebra	1	0.94		
<b>Unidentified Medium Bird</b>				
Left radius shaft	2	1.27		

### Mammals

*Bos taurus*. Thirty-four specimens with a weight of 930.92 g were identified as domestic cattle material (Table 1). MNI = 2 individuals; based on fused and unfused specimens, these include one subadult and one adult. Cattle remains consisted of one compact bone fragment, one proximal femur end fragment and two proximal femur shaft

fragments, one long bone proximal epiphysis fragment, 26 rib shaft fragments, one left first phalange, one left proximal lateral tibia end fragment, and one right nearly complete patella. Additionally, one tooth enamel fragment was tentatively identified as *Bos taurus*. Thirty specimens were modified, including 24 cut fragments and six rodent gnawed fragments.

*Didelphis virginiana*. The opossum was identified on the basis of four specimens—a left mandible with M2, M3, and M4. Weight was 8.8 g. The wear on the teeth indicated an adult. MNI = one individual.

*Ovis/Capra*. Six specimens with a weight of 100.78 g were identified as domestic sheep/goat. This material consisted of one burned proximal left femur, one left scapula, three left distal tibia ends, and one right distal tibia. MNI = 3 individuals, based on the tibia. The femur, scapula, and one left distal tibia all exhibited evidence of rodent gnawing, while the right distal tibia had been butchered. Tentatively assigned to the genus of domestic sheep/goats was a right astragalus, also rodent-gnawed. Finally, one pelvic fragment, consisting of a portion of the acetabulum with part of the ischium and pubis, was tentatively assigned to domestic sheep (cf. *Ovis* sp.). This specimen had also been butchered.

*Rodentia*. Rodents are represented in the assemblage by three specimens weighing 1.24 g. These consist of one left proximal ulna, one right femur, and a sacrum. MNI = one individual. Based on size, the material is probably a rat.

*Sus scrofa*. Domestic swine are represented in the site assemblage by 132 specimens with a weight of 1524.6 g. MNI = 7 individuals: 6 adults, based on right and left tibias, and one subadult  $\leq$  three months, based on teeth. Three specimens (2.2 percent) were burned, while 45.5 percent was modified either culturally or naturally. Cultural modifications consisted of butchering marks on four specimens, while natural modifications consisted of carnivore or rodent gnawing. Some 40.9 percent of all pig specimens had evidence of rodent gnawing, while only two had evidence of carnivore gnawing.

**Table 4. *Sus scrofa* Specimens.**

Specimen	NISP	Wt. (g)	Burned (n)	Modified (n)
Deciduous incisor	1	<.1	--	--
Deciduous lower cheek tooth	1	.6	--	--
Permanent canine	1	2.11	--	--
Proximal metapodial end	1	5.33	--	1
Mandible fragment	2	26.5	--	2
Left deciduous lower PM2	1	*	--	--
Left deciduous lower PM3	1	*	--	--
Left deciduous lower PM4	1	*	--	--
Left deciduous upper PM4	1	*	--	--
Left permanent lower M1	4	*	--	1
Left permanent lower M2	4	*	--	--
Left permanent lower M3	4	*	--	--
Left permanent lower PM3	2	*	--	--
Left permanent lower PM4	3	*	--	--
Left permanent upper I2	1	*	--	--
Left permanent upper M1	2	*	--	--
Left permanent upper M2	2	*	--	--
Left permanent upper PM4	1	*	--	--
Left permanent lower I1	1	.3	--	--
Left permanent lower I2	1	.3	--	--
Left permanent upper PM3	1	1.8	--	--
Left permanent upper PM3	1	1.9	--	--

<b>Table 4. <i>Sus scrofa</i> Specimens.</b>				
<b>Specimen</b>	<b>NISP</b>	<b>Wt. (g)</b>	<b>Burned (n)</b>	<b>Modified (n)</b>
Left occipital condyle	1	2.04	--	--
Left premaxilla	2	11.21	--	--
Left permanent lower canine	1	4	--	--
Left scapula neck	1	4.25	1	--
Left calcaneus fragment	1	4.7	--	1
Left fibula shaft	2	6.9	--	--
Left ulna shaft fragment	1	8.65	--	1
Left proximal metatarsal 4	1	9.77	--	--
Left proximal femur shaft	1	11.08	--	1
Left metatarsal 4	1	11.97	--	--
Left distal femur shaft	1	12.23	--	1
Left proximal metacarpal 3	2	13.45	--	2
Left distal posterior humerus shaft	1	13.46	--	1
Left proximal ulna	3	45.53	--	3
Left proximal metatarsal 3	2	13.73	--	2
Left proximal radius	2	29.83	--	--
Left zygomatic	2	14.97	--	--
Left zygomatic process	1	16.25	--	--
Left scapula glenoid fossa & incom. blade	1	18.93	--	1
Left humerus shaft fragment	1	20.7	--	1
Left mandible horizontal ramus portion	5	268.19	--	6
Left maxilla	2	43.83	--	--
Left calcaneus minus prox. epiphysis	2	21.44	--	1
Left temporal	1	22.68	--	--
Left tibia shaft fragment	1	22.85	--	1
Left proximal humerus	1	26.35	--	--
Left proximal tibia shaft	1	33.18	--	2
Left distal humerus	1	41.87	--	1
Left mandible ang. process & mand. condyle	4	53.07	--	2
Left tibia shaft	4	82.27	--	4
Right deciduous lower PM2	1	*	--	--
Right deciduous lower PM3	1	*	--	--
Right deciduous lower PM4	2	1.3	--	--
Right permanent lower M1	1	*	--	--
Right permanent lower M2	3	7.88	--	1
Right permanent lower PM4	1	*	--	--
Right deciduous upper I3	1	.79	1	--
Right permanent lower I3	1	1.35	--	--
Right permanent lower I1	1	1.79	--	--
Right permanent lower I2	1	2.31	--	--
Right fibula shaft	1	3.29	--	--
Right proximal metatarsal 3	1	5.78	--	1
Right proximal metacarpal 3	1	6.08	--	--
Right metatarsal 4 shaft	1	6.22	--	1
Right distal radius shaft	1	6.42	--	1

Table 4. <i>Sus scrofa</i> Specimens.				
Specimen	NISP	Wt. (g)	Burned (n)	Modified (n)
Right calcaneus minus prox. epiphysis	1	6.43	1	--
Right proximal metatarsal 4	1	6.48	--	1
Right maxilla	1	6.7	--	--
Right calcaneus fragment	1	8.08	--	1
Right proximal radius shaft	1	8.55	--	1
Right proximal ulna	1	9.74	--	1
Right humerus shaft fragment	1	14.26	--	1
Right proximal ulna shaft	1	14.76	--	1
Right proximal femur shaft	1	15.5	--	1
Right distal femur shaft	1	15.7	--	1
Right radius shaft	1	15.91	--	1
Right mandible ang. process & mand. condyle	2	19.8	--	1
Right distal tibia shaft	1	22.05	--	1
Right proximal humerus shaft	1	23.56	--	--
Right mandible horizontal ramus portion	1	39.1	--	1
Right humerus shaft	2	43.71	--	2
Right femur shaft	1	53.45	--	--
Right distal humerus shaft	2	83.38	--	2
Right tibia shaft	5	138.82	--	5
Mandible horiz.ramus w/incisor alveolus	1	7.2	--	--

\*Intact, weighed w/jaw.

Material tentatively identified as *Sus scrofa* included 47 specimens with a weight of 250.15 g. Eight of these specimens were burned, 10 had butchering marks, and 16 were rodent gnawed. This material included 4 cranial fragments, 4 long bone shaft fragments, one metapodial shaft, 36 rib shaft fragments, one left distal anterior humerus shaft fragment, and one right humerus shaft.

*Sylvilagus floridanus*. Three specimens weighing 6.3 g were identified as Eastern cottontail rabbit. MNI = two individuals (one subadult and one adult). The specimens included one complete left tibia minus the proximal epiphysis, one proximal tibia, and one right scapula. None of this material had been modified.

Unidentified Mammal. Unidentified mammalian material in the assemblage was separated into the categories of very large (12.2 percent), large (84.9 percent), and medium (2.9 percent) mammals (Table 1).

This material could not be identified to genera or species. Unidentifiable material was assigned when possible to this category based on similarity of thickness, bone morphology, and other characteristics which, while precluding classification to a particular taxon, could be used to identify the specimens as probably mammalian.

The only very large mammal in the assemblage was *Bos taurus*. Very large mammal remains consisted of 21 faunal specimens with a weight of 462.85 g. These specimens included 7 rib shaft fragments, 4 vertebral fragments, one proximal scapula fragment, 7 long bone fragments, and 2 flat bone fragments. One specimen was burned, 12 had butchering marks, and 6 were rodent-gnawed.

Large mammals in the site assemblage include domestic swine and sheep/goat. Large mammal remains consisted of 49 compact bone fragments, 8 flat bone

fragments, 23 long bone fragments, 13 cranial fragments, 1 tooth root fragment, 37 rib shaft fragments, 5 pelvic fragments, 4 scapula fragments, one ulna shaft fragment, and 23 vertebral fragments. Modified large mammal remains consist of 23 burned specimens, 32 specimens with butchering marks, and 46 specimens with evidence of rodent gnawing.

Medium mammal remains consisted of five rib shaft fragments with a weight of 26.93 g. These were the size of a medium dog or large raccoon. They could not be identified further, and may belong to the opossum identified in the assemblage.

#### *Osteichthyes*

*Ictalurus punctatus*. Channel catfish is represented in the assemblage by a single pectoral spine with a weight of .51 g. MNI = one individual.

Additionally, one large indeterminate specimen with a weight of .56 g was identified as belonging to a large fish, but no other assessment of this material could be made.

#### *Vertebrata*

Unidentified vertebrate. Seven faunal fragments with a combined weight of 2.31 g could not be classified further than unknown vertebrate material; this consists of two flat bone fragments, one cranial fragment, and four flat bone fragments. None of this material was burned or otherwise modified.

## **DISCUSSION AND INTERPRETATION OF THE SITE ASSEMBLAGE**

### **Taphonomic Factors Affecting the Assemblage**

Various factors may affect the character of a faunal assemblage, including root-etching, breakage, gnawing, burning, and cutting. Modifications such as cutting were

described for specimens above. No specimens were root-etched. This suggests that the bones were deposited in areas of the site that were free from root-encroachment. Breakage was a significant factor in the analysis of the assemblages. Nearly half (46 percent) of all specimens could only be identified as avian, fish, mammalian, or vertebrate—largely because specimens lacked diagnostic criteria due to the degree of breakage. Breakage was especially responsible for the relatively high frequency of unidentified large mammal remains in the assemblage (31.1 percent). Breakage can occur at any point in the development of the faunal assemblage—from butchering, food preparation, cooking, consumption, disposal, post-depositionally in the form of trampling or similar disturbances, and during recovery, transport, and analysis.

Carnivore and rodent gnawing was identified on 32 percent of all faunal material. However, by far the majority of gnawed specimens had evidence of rodent gnawing (97.6 percent). This indicates that faunal remains were not sealed upon deposition. The over-all representation of faunal remains in the assemblage in general may indicate that alternate means of disposal away from the structure was utilized for this type of material, such as burning. The two features from which faunal remains were recovered were located beneath an outbuilding at Glenwood; this structure most likely served as both kitchen for the main house and residential space for servants/slaves. There is no indication that the largest feature represents a pit cellar. No entrance is present from within or outside of the structure. Therefore, it would appear that food refuse, including animal bones, were deposited directly beneath the floor of the structure. This situation has been documented at other, similar structures (Kelso 1997). The discard of other artifacts, such as ceramics, indicates that the faunal remains were deposited as part of routine household refuse.

The frequency of rodent-gnawed remains suggests that the site was highly attractive to and regularly available to vermin. The general lack of rodent remains in the assemblage (only three specimens) indicates that rodents could come and go freely among the remains once these were deposited. If killed as nuisance vermin, rodent carcasses were disposed of elsewhere. While no dog remains were present in the assemblage, four specimens exhibited slight evidence of carnivore gnawing. The relatively low frequency of carnivore gnawing supports the interpretation that the features were not accessible from the outside.

Burned elements (n = 41) accounted for only 8.7 percent of the total sample. Burning clearly was not a major factor in the fragmentary nature of the faunal assemblage. However, burning was a factor in the assignment of specimens to either probable swine (17 percent) or large mammal (15.8 percent).

Butchering marks were present on 83 specimens or 15.6 percent of the assemblage. These were identified as sawn or cut ends of specimens, for the most part, and all were identified on large or very large mammals. Specifically, 38.6 percent of such marks were present on large mammal remains, 14.5 percent on very large mammal remains, 4.8 percent on swine specimens, 12.1 percent on probable swine remains, 28.9 percent on cattle remains, and 1.2 percent on sheep.

### **Dietary Contributions**

Concerning dietary contributions represented by the faunal remains from the site, several observations may be made. Generally, contributions to the diet of the occupants of an archaeological site can be approached in several ways (Hesse and Wapnish 1985). First, the identified taxa can be examined to determine whether all species may have contributed to the diet, or whether some taxa may be incidental to the

site. Second, biomass estimates can be constructed to investigate the relative importance of each taxon to the diet. However, due to the limited sample sizes, estimated biomass values were not calculated. Third, an examination of meat cuts may indicate socioeconomic status of site occupants, i.e., whether they were consuming high-end meat cuts or poorer quality cuts. This latter question is of importance at Glenwood as the faunal remains were recovered beneath a building which functioned both as servants' quarters and as kitchen for the main house. Thus, the faunal remains could potentially be associated with two distinct occupant groups.

Domestic species from Glenwood included cattle, swine, sheep/goat, turkey, duck, and chicken. Thus, it seems likely that the large mammal material (n=165 or 31.1 percent of the site assemblage) can most likely be attributed to domestic swine and/or sheep/goat. By MNI, swine occur at a ratio of 2:1 to sheep/goat and at a ratio of 3:1 to cattle, indicating that swine resources are more commonly consumed by the household. The relatively low presence of sheep/goat suggests that this resource was not a mainstay of subsistence. Very large mammal remains most likely represent cattle. Cattle may have been kept primarily for milk production and secondarily for beef.

As noted above, butchering marks were present on all large domestic species present in the assemblage, including cattle, swine, and sheep. An examination of the data for *Sus scrofa* in Table 4 reveals that all butchering units are represented by the faunal remains: cranial, shoulder, foreleg, hindleg, and back. This suggests that pigs were being raised and butchered for consumption on site. One *Sus* tibia shaft was cut distally, while a small t-bone on a large mammal vertebra may represent a pork loin chop (Rahn 1977). The situation is not as clear for cattle. Cattle remains are represented in the assemblage by the hindleg

(femur, patella, and tibia), as well as ribs, a toe, and a tooth. Two very large mammal long bone specimens were long bone rings, one cut near the end of the shaft; these may represent beef round steaks. The cattle sample may be indicative of off-site purchase of particular cuts of meat, portions of a carcass, or it may be that cattle were also raised on-site and butchered there, with an alternate place of deposition for most of the remains. Cattle may have been valued more for dairy and other products, rather than primarily as a source of meat. Butter, cheese, milk, and hides are some of the secondary products provided by cattle. Based on skeletal representation, sheep remains represent a shoulder or hindleg cut. It is possible that sheep/goat meat was purchased for special occasions, although

the lack of other skeletal elements may have resulted from the distribution of butchered carcasses among different households, animal waste into different disposal locations, and/or food remains being deposited into a variety of disposal areas.

An examination of the distribution of skeletal specimens by butchering units (Figure 1) indicates that all units are represented in the assemblage, except for axial. While axial is under-represented in Figure 1 for *Sus*, it is likely that the large mammal vertebral fragments are pig. A meat utility index, in which the percentage of high versus low utility units is measured, indicates that high utility pork units account for 68 percent of domesticated meat units.

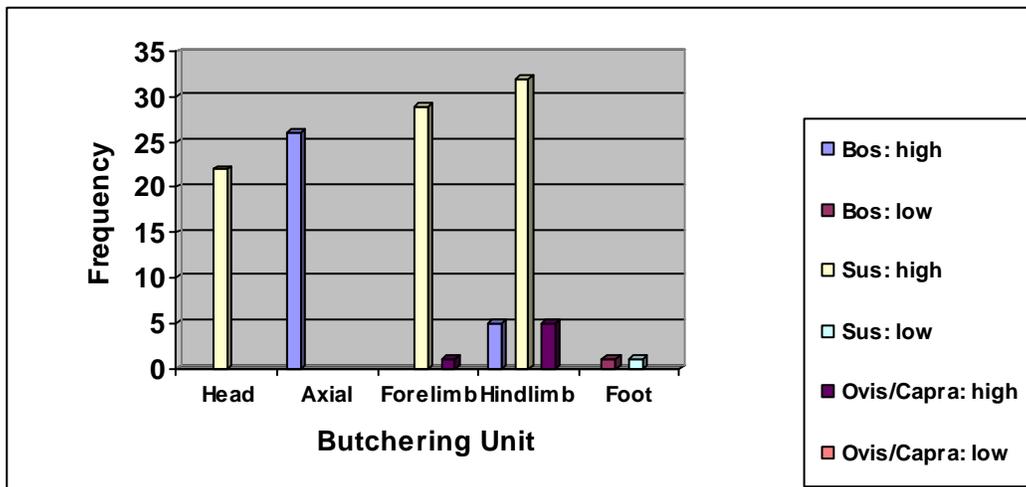


Figure 1. Frequency of Butchering Units for Meat Utility Index.

Butchering information is not as clear for cattle, as these are presented largely by ribs, possibly some vertebrae, and hindleg elements only. All are high utility meat units with a utility index of 25.4 percent. Sheep/goat is represented by a single forelimb specimen and five hindlimb specimens, also representing high utility meat cuts.

Domestic fowl are represented by chicken, turkey, and duck. By MNI, chickens are present at a ratio of 10:1 to duck and 5:1 for turkey. Chickens are also

represented in the assemblage by adult males, females, and poults. This suggests that a flock was kept. The relatively fewer numbers of turkeys and ducks indicate that these were probably not kept in flocks, but that they were occasional additions to the diet. It is probable that chickens were kept both for meat and eggs, although no eggshell was present in the assemblage. This may have been due to a number of factors, such as recovery methods or recycling of eggshell on compost heaps or as part of pig swill.

This site also produced small samples of faunal specimens identified as channel catfish and large fish, dove/pigeon, rabbit, opossum, and small and large bird. The channel catfish most likely represents an irregular dietary contribution, and the single large fish specimen may well be channel catfish. The dove/pigeon may also represent an irregular contribution to the diet, although this material could equally likely represent a fortuitous deposition of material unrelated to subsistence. The rabbit is represented by two individuals and, like the dove/pigeon, may or may not represent part of the subsistence remains of the site. If rabbit was consumed, clearly it was not a regular part of the diet. The opossum is represented by a single jawbone that was later gnawed by rodents. Again, it may or may not have represented a part of the diet. The small and medium bird remains may be parts of the duck, the chickens, or the dove/pigeon. In terms of size, these did not seem likely to be domestic turkey. However, wild bird species are common to the area, including a variety of songbirds, raptors, and owls, etc. It is not possible to determine whether the presence of the indeterminate avian specimens results from the human occupation or not.

As noted earlier in this section, one question raised by the nature of the site is whether the faunal remains can provide any insights into the diet of the site occupants based on their socioeconomic status. Typically, meat cuts are assigned a value based on desirability, price, or other cost factors. Desirability refers to some combination of factors that indicate highly sought after meat cuts—those with the most meat, flavor, tenderness, etc. Opposed to these would be those cuts that are tougher and have less meat and flavor. The ability to procure the choicer meat cuts has been used as an indication of higher status individuals or households (e.g., Allgood 2003; Church 2002; Otter 1993). However, as noted in Reitz et al. 2006, the association of status with meat cut is not as clear cut or as

promising an avenue of inquiry as previously hoped. The assignment of value to meat cuts, for example, may be biased by modern preferences. Heads, for example, are not often seen in modern supermarkets, yet these might well have featured on a high status table, based on recipes from cookbooks of earlier eras. Another point Reitz, et al., make is that human behavior does not always meet our expectations. High status households may be economically able to purchase high-priced meat cuts, but may choose to consume lower price cuts, and vice versa—low income families may use resources to purchase high quality meat cuts.

For this sample, it is clear that high utility meat cuts, such as hams and less frequently, beef roasts, were being utilized by site occupants. It is not possible, at this point, based upon the limited nature of the excavations, to determine more precisely how the faunal remains may reflect the diet of the occupants of the main house as opposed to the servants' or slave quarters.

## SUMMARY

A limited faunal assemblage was recovered during archaeological excavation of the Glenwood site in Kanawha County, West Virginia. The analysis of this material identified a total assemblage of 531 faunal specimens. Six mammals, four birds, and one fish were identified to the level of class/genus. Mammals predominately consisted of domestic species. Domestic mammals included cattle, swine, and sheep/goat. Wild species included Eastern cottontail rabbit and unidentified rodent, probably rat. Domestic chicken, turkey, and duck also were identified, as was dove/pigeon. Channel catfish was represented by a single faunal specimen. This material was deposited beneath a structure which has been determined to represent both an outside kitchen for the main household and as residential quarters for servants/slaves.

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