

USF  
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1995

Pipes

ARCHAEOLOGICAL DATA RECOVERY EXCAVATIONS  
AT THE SHAFT 21 B PROJECT SITE  
NEAR KENT AND WILLOUGHBY AVENUES IN  
BROOKLYN, NEW YORK

CEQR #89-119K

FAUNAL ADDENDUM

909 - 911 Kent Ave

Prepared for:  
KiSKA Construction Corporation  
400 Madison Avenue  
New York, New York 10017

Prepared by:  
Marie-Lorraine Pipes  
12 Briar Way  
Fairport, New York 14450

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### Introduction

36 ✓ The Shaft 21 B Project Site excavations uncovered the remains of two features at 909 and 911 Kent Avenue containing artifact and faunal assemblages. The material recovered from these features dates to the last quarter of the nineteenth century. The Feature 2 material from 909 Kent Avenue is attributed to the Charles D. Conway household. The material recovered from Feature 1 was not assigned to a specific household. Information available for the two lots however indicates that all known residents came from similar ethnic background and social class, though some may have been wealthier than others. Based on this information, assignment to specific household is less critical since it is possible to consider the neighborhood as the broader unit of examination. This neighborhood was composed of skilled and semi-skilled workers and their families, most of whom were of British descent ~~and~~ came from lower middle income backgrounds. Documentary evidence indicates that during the nineteenth century owners of the two lots in question resided on site and regularly had tenants living in their homes. From 1880-1900 Charles Conway owned and lived at 909 Kent Avenue, and had the Cassidy family as his tenants. It is probable that during the period in question the owners at 911 Kent Avenue followed the same practice. → possible

This faunal addendum presents the results of the faunal analysis as well as a description of the methodology used in the analysis, a list of the utilized codes, and the faunal database sorted by provenience and by species. The bone from both features was in good condition, allowing for a fair degree of identification as to species and skeletal element. Both assemblages received an intensive level of analysis that included examination for mends and articulations. The goals of the analysis were to produce dietary profiles for the households associated with 909 and 911 Kent Avenue, to compare the results and to consider them in terms of neighborhood dietary consumption patterns. The interpretation of the faunal material focused on the relative importance of species in the diet and the types of meat cuts consumed. The types of information considered in the interpretation of the data included the range of species, relative frequencies of large domestic mammal species, domestic species body parts distributions, and ranking of meat cuts.

### Results of the Analysis

✓ The faunal assemblages recovered from Features 2 and 1 at 909 and 911 Kent Avenue yielded 480 Total Number of Fragments of bone (TNF), 4.979 kilograms of shell and 0.010 kilograms of coral. Except for the coral, this material represents dietary remains discarded by the residents of the two lots at some point during the last quarter of the nineteenth century. It was anticipated that there would be a predominance of domesticated animal remains, and a correspondingly small amount of wild or exploited species. Except for some fish species, wildlife resources in the area had been severely depleted by this time (Rothschild 1990). The result was that game species such as deer and turtle became rare and more expensive and therefor not commonly eaten by most people. It was also expected that the residents of the lots would not have butchered livestock themselves. Brooklyn, like New York City, had established market networks since the arrival of the Dutch and English in the 17th century (DeVoe 1970). Most residents would have purchased

8/1

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their meat and poultry from the local markets. (Therefore) bones associated with butchering activities were not expected to be present.

#### Feature 2, 909 Kent Avenue

Faunal materials recovered from Feature 2 at 909 Kent Avenue were composed of bone and shell remains. There were 283 Total Number of Fragments (TNF) of bone consisting of bird, mammal and fish, and 4.099 kilograms of shell. Table 1 summarizes the data for each feature by class, species and size range category. It also provides two types of counts. The first is the Total Number of Fragments (TNF) count which serves primarily as a curation tool. The second is the Minimum Number of Units (MNU) which is a reduced count based on mends and actual number of elements and meat cuts. The word 'element' refers to a bone that does not exhibit signs of butchery. All discussions about the faunal assemblages are based on MNU counts and associated percentages unless otherwise indicated. When the word 'bone' is used it infers an MNU value. When the word 'fragment' is used it infers a TNF value. A fair amount of mammal bone from Feature 2 was not identified beyond the class level. This material was assigned to size range categories that included large and medium size mammals. In general, large mammal corresponds to cow, and medium mammal corresponds to sheep and pig. There were 139 elements and meat cuts (MNU) in the bone assemblage from Feature 2, consisting of bird, mammal, and fish. Mammal predominated (70%), followed by bird (22%) and then fish (4%).

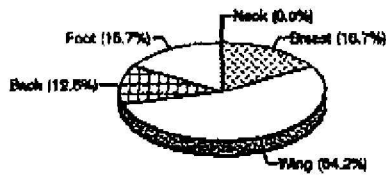
There were 31 bird elements representing 22% of the total bone assemblage from Feature 2 (Table 1). Identified species included chicken and turkey. A small amount of unidentified bird was also present. Chicken was the most frequent bird species. It consisted of 29 elements (21%). Figure 1A presents the body parts distribution for chicken. It indicates the wing (54%) predominated, followed by the breast (17%), foot (17%) and back (13%). These elements represent the main meat bearing parts of the bird. If birds were slaughtered on site there would have most likely have been heads and feet. No head bone was present for chicken or any other bird, however there was a low frequency of foot elements. The foot bones however do not indicate on site slaughter. Instead they probably were used for making stock. The overall distribution of body parts is consistent with the purchase of dressed birds that have had the heads removed but the feet left on. There were two turkey elements representing 1%. These two elements came from the breast and leg. Eight unidentified bird fragments consisted of longbone splinters. Post depositional factors affecting the appearance of the bird bone included staining, gnawing and burning. Five fragments were burned to a calcined state, three bones were chewed and almost all of the bone was stained.

Mammal bone represented 70% of the bone assemblage and included cow (14%), pig (4%), and sheep (16%) (Table 1). In addition to identified species, 33% of the bone was classified as medium and large mammal, and 2% as small and unidentified mammal. Cow consisted of 19 meat cuts. Figure 1B presents the body parts distribution for cow. It shows that most of the bone came from the upper hindlimb (45%), followed by the lower hindlimb (15%) and the upper forelimb (15%). The lower forelimb (10%), vertebrae (10%) and rib (5%) were the least

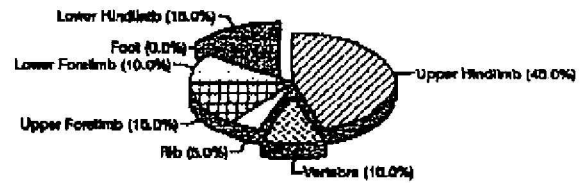
**TABLE 1**  
**SUMMARY OF FAUNAL TABULATIONS**  
**BY SPECIES, FEATURE, TNF, MNU AND RELATIVE PERCENT**

Species	Feature 2 - 909 Kent Avenue				Feature 1 - 911 Avenue			
	TNF	Percent	MNU	Percent	TNF	Percent	MNU	Percent
<b>Bird</b>								
Chicken	33	12%	29	21%	21	11%	16	18%
Duck	-	-	-	-	1	<1%	1	1%
Turkey	2	1%	2	1%	3	1%	3	3%
Unidentified Bird	8	2%	-	-	24	12%	6	7%
<i>Subtotal</i>	<i>43</i>	<i>15%</i>	<i>31</i>	<i>22%</i>	<i>49</i>	<i>25%</i>	<i>26</i>	<i>27%</i>
<b>Mammal</b>								
Cat	-	-	-	-	1	<1%	1	1%
Cow	28	10%	20	14%	26	13%	18	20%
Pig	8	3%	6	4%	1	<1%	1	1%
Sheep	27	10%	23	17%	21	11%	16	18%
Small Mammal	1	<1%	1	1%	2	1%	1	1%
Medium Mammal	123	43%	30	22%	67	34%	20	22%
Large Mammal	35	12%	15	11%	24	12%	8	9%
Unidentified Mammal	4	1%	2	1%	-	-	-	-
<i>Subtotal</i>	<i>226</i>	<i>80%</i>	<i>97</i>	<i>70%</i>	<i>142</i>	<i>72%</i>	<i>65</i>	<i>72%</i>
<b>Fish</b>								
Cod	4	1%	4	3%	1	<1%	1	1%
Unidentified Mammal	7	3%	7	5%	-	-	-	-
<i>Subtotal</i>	<i>11</i>	<i>4%</i>	<i>11</i>	<i>8%</i>	<i>1</i>	<i>&lt;1%</i>	<i>1</i>	<i>1%</i>
<b>Unidentified Material</b>								
<i>Subtotal</i>	<i>3</i>	<i>1%</i>	<i>-</i>	<i>-</i>	<i>5</i>	<i>2%</i>	<i>-</i>	<i>-</i>
<b>TOTAL</b>	<b>283</b>	<b>100%</b>	<b>139</b>	<b>100%</b>	<b>197</b>	<b>100%</b>	<b>90</b>	<b>100%</b>

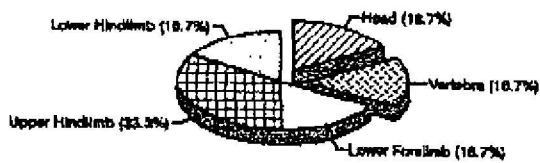
**FIGURE 1**  
**FEATURE 2, 909 KENT AVENUE**  
**BODY PARTS DISTRIBUTIONS OF CHICKEN,**  
**COW, PIG, SHEEP AND LARGE/MEDIUM MAMMAL**



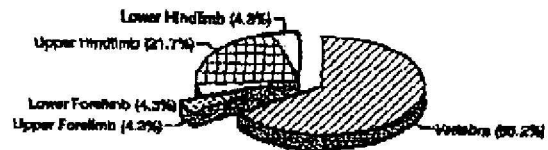
**A. Chicken**



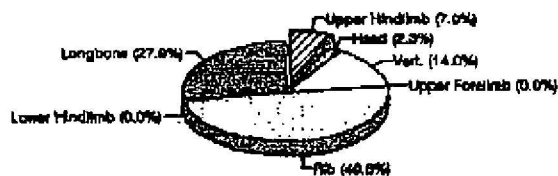
**B. Cow**



**C. Pig**



**D. Sheep**



**E. Large/Medium Mammal**

represented parts. All of these bones came from meat bearing parts. The lack of head and foot bone is evidence that no butchery waste was present for cow. The types of meat cuts present are listed in the database and illustrated in utilized codes of this addendum. They came from a range of primary beef cuts including sirloin, rump, chuck, short plate and shank. They were primarily in the form of steaks although a few roasts and stew cuts were also represented. In most cases the cuts were produced by sawing. Most of the bone was not aged; however in general the size of the specimens indicate most were from full grown animals. Two bones were aged, one was a pelvic section from a neonate calf, the other was a distal tibia section from an adult animal. This information indicates that both veal and beef were represented in the deposit. In addition to butchery marks some bone was further modified by other factors including heat exposure and staining. These modifications however are not specific to any one species in this deposit and will be discussed later.

Pig was the least frequent (4%) mammal species recovered from the deposit, represented by 6 elements and meat cuts. Figure 1C indicates the body parts distribution was dominated by the hindlimb (50%), the upper limb being twice as frequent than the lower hindlimb. Other parts were equally represented and included the lower forelimb, vertebra and head. Types of pork cuts present included leg hams, picnic ham, loin and jowl. The meat cuts were processed by chopping and cleaving. These cuts represented mostly large pieces of meat. The head was represented by a deciduous upper molar. This specimen came from a neonate pig. Normally skull bone is an indicator of butchery waste. However in the case of pig it usually is not because the meat ~~was~~ from the head was often processed for headcheese. Foot bone is also not a good indicator of butchery waste when it comes to pig because they were also commonly eaten. In fact, the lack of foot bones is noteworthy since at this time it was a popular food everywhere on the east coast among the working class. Two other specimens were aged besides the molar. One was a lumbar vertebra aged at less than one year, the other a distal ulna, aged at less than 3 1/2 years. All three aged specimens came from young, immature animals. Like other bone in the deposit the pig bone was also stained. One bone specimen showed signs of canine gnaw marks.

Sheep was the most frequent (16%) of the three large domestic mammal species recovered from Feature 2 (Table 1). It consisted of 23 elements and meat cuts, almost all of which exhibited clear signs of butchering. Figure 1D indicates that sheep body parts were dominated by vertebra (65%), followed by the upper hindlimb (22%). Lower hindlimb, lower forelimb and upper forelimb were present in very low frequencies (4%). Meat cuts included shoulder chops, loin chops, leg roasts, rack and shank cuts. Most of the cuts were produced by chopping, some by cleaving. No head or foot bone was present. Ten vertebrae were aged at 4 years plus, indicating mutton was consumed. Besides butchery marks and staining no modifications to the bone were present.

As noted above much of the mammal bone not identified by species was classified as large and medium mammal (33%) (Table 1). Much of this bone was composed of butchered vertebrae and ribs which came from cow, pig and sheep. In Figure 1E the skeletal data for large and medium

**TABLE 2**  
**SUMMARY OF BONE MODIFICATIONS BY FEATURE**

Feature	Total Number of Burned Bone		Total Number of Gnawed Bone		Total Number of Weathered Bone		Total Number of Mammal Meat Cuts		Total Number of Mammal Bones With Butchery Marks	
	TNF	%	TNF	%	TNF	%	MNU	%	MNU	%
Feature 2 909 Kent Avenue	18	6%	6	2%	201	74%	35	36%	74	76%
Feature 1 911 Kent Avenue	71	36%	12	6%	67	34%	30	46%	41	63%

mammal remains have been combined. The figure indicates that 50% of this material consisted of ribs, 27% of longbone, 14% of vertebrae, 7% of upper hindlimb and 2% of skull. The 2% skull may be related to the pig tooth noted above. Overall most of the mammal bone exhibited butchery marks (76%). Table 2 indicates that there were 35 actual meat cuts (MNU) and 74 elements (MNU) with some type of butchery mark.

Fish comprised 8% of the bone assemblage (Table 1). Cod was the only fish species identified, representing 3%. Cod was composed of skull and vertebrae. Unidentified fish consisted of vertebrae. No butchery marks were observed on any fish elements.

The bone deposit from Feature 2 was affected by a number of post-depositional factors including burning, gnawing, and weathering. Table 2 summarizes this information data for both features. Based on the TNF count for Feature 2, 6% of the bone was burned, 2% was gnawed and 74% was weathered. The small amount of burned bone was calcined. It is possible that burning may have been one way of disposing of dietary refuse.

Specimens exhibiting gnaw marks appeared limited to canine marks. There were no rodent gnaw marks on any specimens. This is in accord with the complete lack of rodent remains in both features. Almost all of the bone exhibited some signs of weathering. Weathering was seen as flaking off the cortex and as an oily discoloration or stain on the surface of the bone. Staining was present on bone consistently throughout the deposit.

In addition to bone, shell remains were also recovered from the feature. Species present included hard shell clam and oyster. Hard shell clam consisted of 144 valves, and oyster of 25 valves. There is evidence indicating that the meat from these animals was also consumed by residents. Forty-six hard shell clam edge fragments and one oyster shell fragment bear distinct pry marks. Like the bone, much of the shell exhibited signs of weathering in the form of chalky flaking surfaces.

The faunal material recovered from Feature 2 consisted primarily of domesticated animal remains including chicken, turkey, cow, pig and sheep. In addition non-domesticated species were present including cod, hard shell clam and oyster. The distribution of body parts for domesticated species indicates the material represents dietary refuse remains. There is no butchery waste present for any species. Several meat cuts were recorded for the three large domestic mammal species. The types of meat cuts present for beef were primarily steaks, with low frequencies of roasts and stew cuts. The same is true for mutton cuts. However pork cuts were larger and tended to be hams and pork roasts. Most of the meat cuts are of high and moderate economic rank. A few low rank cuts such as shanks were probably used for flavoring soups and stews.

#### 911 Kent Avenue

Feature 1, located at 911 Kent Avenue yielded a faunal assemblage similar in composition to Feature 2 at 909 Kent Avenue, though slightly smaller, ~~than~~. There were 197 Total Number of Fragments (TNF) of bone, 0.880 kilograms of shell and 0.010 kilograms of coral. With the exception of the coral all of this material represented dietary refuse. In fact the single piece of finger coral should probably be considered ~~to be~~ a small find and

~~represents~~ presents or (depicts?)

not part of the faunal assemblage. Table 1, the faunal data by class, species and size-range category and provides the TNF and MNU counts. As with Feature 2, all discussion concerning Feature 1 is based on MNU counts unless otherwise noted. The bone deposit consisted of 90 elements and meat cuts from bird, mammal, and fish. Mammal predominated (72%), followed by bird (27%) and then fish (1%).

Bird represented 27% of the total bone assemblage from Feature 1. Identified species included chicken (18%), duck (1%) and turkey (3%). In addition to identified species, unidentified species comprised another 7% (Table 1). There were 16 chicken elements. Figure 2A presents the distribution of chicken body parts. The wing was the most frequently body part represented (55%), followed by the breast (21%), and finally the back and foot equally (12%). These represent the primary meat bearing parts. Once again as in Feature 2 there was evidence of skull bone. Two bones exhibited canine gnaw marks, four bones were calcined, and another four bones were stained. Turkey was represented by three leg bones, and duck by a humerus. The turkey bones showed no signs of modification. The duck bone was calcined. Unidentified bird bone included two sternum fragments and three radii. The rest of the material consisted of longbone splinters.

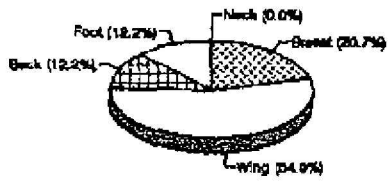
Mammal bone comprised 72% of the bone assemblage and included cat (1%), cow (20%), pig (1%), and sheep (18%) (Table 1). Medium and large size mammal comprised 31% and small mammal 1%. Cat was represented by a partial humerus. Small mammal consists of a rib which may have belonged to the cat. The cat was a neonate probably less than two months old. The presence of cat was not surprising since there were a number of bones in the deposit exhibiting small canine gnaw marks. Cow was the most frequent of the three large domestic mammal species, represented by 18 elements and meat cuts (20%). Figure 2B shows that cow was composed predominantly of cuts from the upper hindlimb (33%) and vertebrae (28%). Rib and the lower forelimb were equally represented (11%). The least frequent parts were the upper forelimb, lower hindlimb and foot, each represented by 6%. With the exception of the foot bone all of these are meat bearing body parts. There was a wide range of beef meat cuts present in the deposit. They included short loin, rib, sirloin, round, rump, chuck, short rib, and shank. Most of the cuts were produced by sawing. Foot bone consisted of a single hoof. It does not appear to be butchery waste. No exact age was obtained for the hoof. However based on its appearance it appears to have come from a young animal. At this time calves feet were commonly purchased for rendering gelatin. This specimen probably originated from that type of activity. Two other specimens were aged in addition to the hoof. One was a distal humerus, aged at 1 1/2 years plus. The other was a proximal tibia, aged at 3 1/2 years plus. With the exception of the hoof, there was no evidence for veal, only for beef. Bone modifications other than butchery marks included two bones with canine gnaw marks, two burned bones, and 12 bones exhibiting signs of exposure to the elements.

Pig was poorly represented in Feature 1 (1%) (Table 1). There was a single bone consisting of a calcined proximal femur epiphysis that probably came from a shankless ham. It was aged at less than 3 1/2 years.

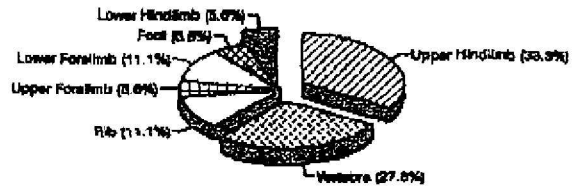
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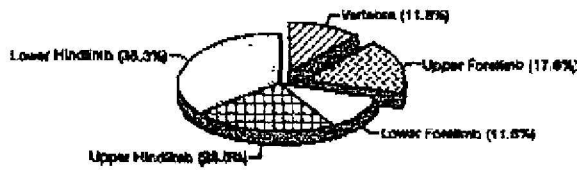
FIGURE 2  
FEATURE 1, 911 KENT AVENUE  
BODY PARTS DISTRIBUTIONS OF CHICKEN,  
COW, PIG, SHEEP AND LARGE/MEDIUM MAMMAL



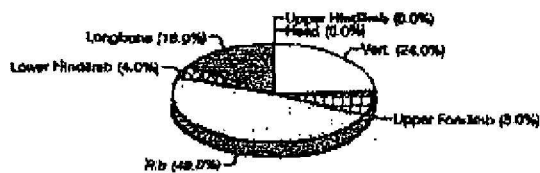
A. Chicken



B. Cow



C. Sheep



D. Large/Medium Mammal

Sheep was the second most frequent mammal species (18%) (Table 1). It consisted of 16 elements and meat cuts. Figure 2C indicates that sheep body parts came predominately from the lower hindlimb (35%), followed by the upper hindlimb (23%). The next most common parts were the upper forelimb (18%), vertebrae (12%) and the lower forelimb (12%). Meat cuts included leg roasts, shoulder chops and shanks. Most of the meat cuts were produced by chopping and cleaving. Nine specimens were aged. Five of these were aged at less than 3 1/2 years of age. One was aged at less than 3 years, one at 1/4 year plus, one at 1/2 year plus and one at 3 1/2 years plus. This indicates the presence of lamb and mutton. One bone exhibited canine gnaw marks. Three bones were burned, either charred or calcined. ✓

Medium and large mammal bone comprised 31% of the bone assemblage. Figure 2D indicates that the majority of this material consisted of rib (48%), followed by vertebra (24%) and longbone (16%). Much of the bone exhibited butchery marks. Several of the bones were calcined, a few exhibited canine gnaw marks and some were weathered from exposure to the elements.

One piece of cod was present (1%), represented by one vertebra.

The bone from Feature 1 was fairly well impacted by post-depositional factors. Table 2 indicates that 36% of the bone was burned, much of it calcined. In addition, 6% exhibited canine gnaw marks. Forty-six percent of the bone exhibited signs of weathering. The bone from Feature 1 was not stained like that in Feature 2.

In addition to bone, shell was recovered from the feature. It consisted of hard shell clam and oyster. There were 17 hard shell clam valves, seven of which exhibited pry marks. There were 6 oyster valves none of which showed signs of pry marks. ✓

The faunal material from Feature 1 was composed mainly of domesticated bird and mammal species. Fish and molluscs were present as well. An examination of body parts distributions for chicken, cow, pig and sheep indicated the assemblage was composed strictly of dietary refuse material. Meat cuts were present for all three large mammal species. Beef was represented by a wide variety of meat cuts of high, moderate and low economic rank. Veal and beef were both represented for cow. Sheep cuts came from both lamb and mutton. Most of the cuts were of low economic rank. ✓

#### Comparison of Faunal Materials from Features 2 and 1

The faunal assemblages from the two features shared many similarities. There were however a number of ways in which they differed. The similarities and differences will be discussed in terms of range of species, relative percent of large domestic mammals, body parts distributions of large domestic mammals and economic ranking of meat cuts. ✓

There was a limited range of species in both features. Bird species for both features included chicken and turkey. However Feature 1 from 911 Kent Avenue also had a low frequency of

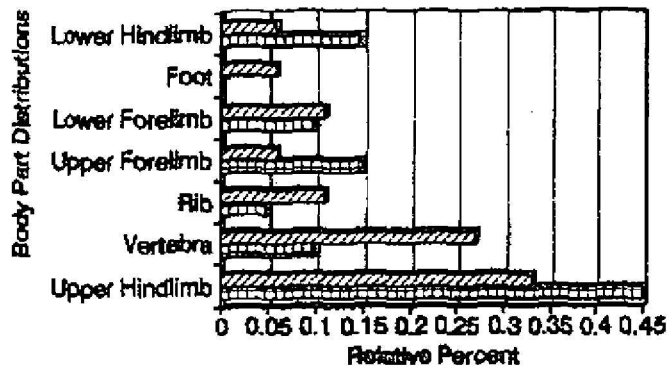
duck. In each feature chicken was the most frequent of bird species. Mammal species were also comparable. Neither feature contained rodent remains. Both had cow, pig and sheep. In addition Feature 1 yielded a low frequency of cat, though this is not significant in terms of diet. Fish was present in both features in low frequencies, with cod being the only identified species. Finally, both features contained hard shell clam and oyster.

The relative frequencies of the three large domestic mammal species can be an indication of their importance as dietary staples. In Feature 2 their relative frequencies were cow 41%, pig 12%, and sheep 47%. In Feature 1 their relative frequencies were cow 51%, pig 3%, and sheep 46%. The extremely low frequency of pig in Feature 1 impacts these values to a certain extent. However, overall, the values serve to illustrate that pig was not an important component in the diets of residents at either lot. Cow and sheep were important elements. In Feature 2 sheep is more frequent, while in Feature 1 cow is more frequent.

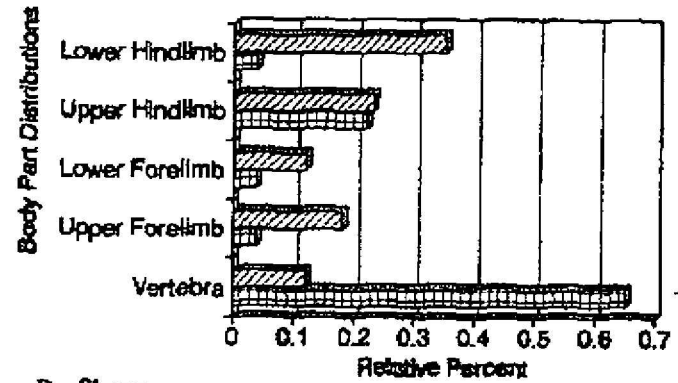
As observed above, the two features were similar in terms of the relative importance of the three large domestic mammal species. In order to further investigate this similarity it is necessary to compare body parts distributions. Figure 3 compares body parts distributions for cow, sheep and large/medium mammal. The data for pig are not presented here because of its low frequency in both features. It is enough to say that femurs were present in both features and therefore they are similar. Figure 3A presents body parts distributions for cow. It shows major differences overall in the distribution frequencies between the features. The upper hindlimb predominated in both features. In Feature 2 however the upper hindlimb is significantly more common than all other body parts which all lie within 5 percent of each other. In Feature 1 on the other hand, vertebrae are almost as frequent as the upper hindlimb. All other body parts are present in very low frequencies and within 5 percent of other. Figure 3B presents body parts distributions for sheep. Again the distributions between the two features are very different. In Feature 2 almost all of the bone came from vertebrae. Except for the upper hindlimb all other body parts were present in very low frequencies. The forelimb is far less represented than the hindlimb. In Feature 1 the lower hindlimb predominated, followed by the upper hindlimb. Vertebrae and forelimb were present in lower frequencies. The only similarity between the two features is that the hindlimb is more frequent than the forelimb in both. The combined data for large and medium mammal remains are presented in Figure 3C. They are more similar than cow and sheep. This is probably because they both contain similar type of unidentified bone such as longbone and rib fragments.

Body parts distributions do not provide enough information for assessing the quality of meat cuts consumed by the residents of the two lots. Based on this information alone it might seem that residents from both lots consumed primarily expensive beef cuts from the upper hindquarter, while the high frequency of sheep vertebrae found in Feature 1 might be mistaken for cheap meat cuts. In order to fully understand the significance of these distributions it is necessary to consider the types of meat cuts present in terms of economic rank or scale. Table 3 presents the economic

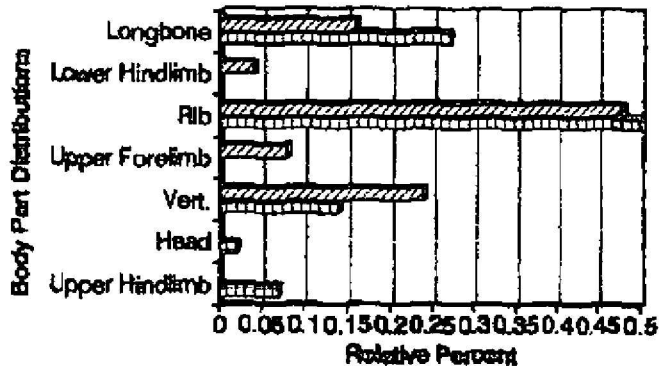
Figure 3  
 Comparison of Body Parts Distributions of Cow, Sheep  
 and Large/Medium Mammal from Feature 2, 909 Kent Avenue  
 and Feature 1, 911 Kent Avenue



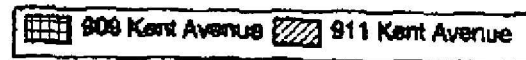
A. Cow



B. Sheep



C. Large/Medium Mammal



ranking of beef, mutton and pork meat cuts. These economic ranks are based on the work by Schulz and Gust (1983) from a number of late nineteenth sites in Old Sacramento, California.

The economic ranks for beef cuts can be lumped into high (ranks 1-3), moderate (ranks 4-6) and low (ranks 7-10) brackets. Feature 2 beef cuts consist of 40% high value cuts, 25% moderate value cuts, and 35% low value cuts. Feature 1 beef cuts consist of 56% high value cuts, 16.5% moderate value cuts and 27.5% low value cuts. While Feature 1 clearly has a greater percent of high value cuts, in general the overall distributions are not too different. The economic ranks for mutton present a very different picture. The meat cuts can be lumped into three categories of high value cuts (ranks 1-2), moderate value cuts (rank 3-4) and low value cuts (rank 5). In Feature 2 meat cuts are spread out across all three categories, 47% are high value cuts, 35% are moderate value cuts, and 17% are low value cuts. In Feature 1 meat cuts come from the three categories as well, 25.5% are high value cuts, 12% are moderate value cuts, and 62.5% are low value cuts. Unlike Feature 2 where there is a great frequency of high value cuts (47%), in Feature 1 there is a preponderance of low value cuts (62.5%). Pork economic ranks are also provided in Table 3. However the small sample of pig bones limits the conclusions that can be drawn from this data. In Feature 2 pork meat cuts are more or less evenly distributed between high, moderate and low value cuts. In Feature 1 the only meat cut present came from a high value cut.

#### Summary and Conclusions

The primary goals of the investigation of the faunal remains from Feature 2 at 909 Kent Avenue and Feature 1 at 911 Kent Avenue were to generate dietary profiles for both lots, to compare the results and to consider them in terms of their significance at the neighborhood level. Overall the two features were quite similar. The assemblages were composed of the remains of domesticated bird and mammal species, as well as low frequencies of fish. In both, mammal predominated, followed by bird, then fish. Neither yielded wild mammal or bird species remains. Chicken was ~~most~~ the most frequent bird species, and turkey was present in small amounts in the two features. Also in both features mammal species consisted of cow, pig and sheep. The same shell species were represented consisting of hard shell clams and oyster.

The bone from the two features differed from each other slightly in the range of species and relative frequencies of large domestic mammals. Feature 1 at 911 Kent Avenue had a low frequency of duck and cat, neither of which species were present in Feature 2. In Feature 2 sheep predominated relative to cow and pig, while in Feature 1 cow predominated relative to sheep and pig. In both features however pig was present in very low frequencies. Basically, however, the relative frequencies of cow to sheep were not large enough to be considered significant. The assemblages also differed slightly in terms of post-depositional factors affecting the bone. Feature 2 had low percentages of burned and gnawed bone, and a high percentage of weathered bone. Feature 1 on the other hand had higher percentages of burned and gnawed bone, and a lower percentage of weathered bone. Body parts distributions were basically the same for chicken but differed for cow and sheep. These differences were considered in terms of the

Table 3  
Economic Ranking of Beef, Mutton and Pork Meat Cuts

Meat	Rank #	Primary Meat Cuts	Feature 2, 909 Kent Avenue Relative Percent	Feature 1, 911 Kent Avenue Relative Percent
Beef	1	Short Loin	-	28%
	2	Rib	5%	5.5%
	2	Sirloin	35%	17%
	3	Round	-	5.5%
	4	Rump	10%	5.5%
	5	Chuck	15%	5.5%
	6	Short Rib	-	5.5%
	7	Short Plate	5%	-
	8	Neck	5%	-
	9	Shank	25%	22%
	10	Foot	-	5.5%
Mutton	1	Loin	26%	-
	1	Rack	4%	-
	2	Leg	17%	25.5%
	3	Shoulder	35%	12%
	4	Breast	-	-
	5	Shank	17%	62.5%
Pork	1	Shankless Ham	33%	100%
	2	Loin	16.6%	-
	3	Butt	-	-
	4	Shank Ham	16.6%	-
	4	Picnic Ham	16.6%	-
	5	Bacon	-	-
	6	Salt Pork	-	-
	7	Spare Ribs	-	-
	8	Jowl	16.6%	-
	9	Feet	-	-

economic ranking of meat cuts represented. When considered in such a way the fact that different meat cuts were present did not change the fact that they were more or less of the same economic rank. Mutton and lamb meat cuts on the other hand were very different. In Feature 2 meat cuts were predominantly of high and moderate economic rank, while in Feature 1 the majority of the cuts were of low economic rank. This was perhaps the most significant difference between the two assemblages.

In conclusion, the faunal assemblages from 909 and 911 Kent Avenue presented overall similar dietary profiles. They each consisted of a variety of foods based on four domesticated bird and mammal species. The lack of bone commonly associated with on-site slaughtering and butchering of livestock indicates that the residents purchased their meat and poultry from the market. The types of meat cuts represented by cow, pig and sheep are an indication that the residents had the ability to buy relatively expensive to moderately expensive meats. The high frequency of low value cuts from 911 Kent Avenue may simply be the household preference and an economic indicator. In general the similarities between the two lots suggest that residents had access to quality foods and the financial means to buy them. They also imply that the residents shared similar preferences for beef and mutton over pork. The results of the investigation indicate that the residents selected their meats and poultry from what was available at the market, that they shared food preferences and that they had the financial means to buy expensive to moderately expensive foods on a regular basis. ^

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A 15

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### Methodology

The faunal material received a Stage 2 level of analysis allowing for identification of species, element, age at death, and bone modifications. Two types of counts were obtained, the Total Number of Fragments (TNF) and the Minimum Number of Units (MNU). The TNF count serves mainly as a curatorial tool. It reflects the number of bone fragments comprising a single line of data entry. For example, if seven bone fragments mend to form a single cow mandible the TNF count is 7. The MNU count represents an adjusted count based on mends. So in the example from above the same data entry line will have an MNU count of 1. Both types of counts were obtained after the faunal assemblages were examined for mends. The age at death determination of an element <sup>was</sup> based on Schmid (1972). Meat cut identifications were illustrated using an expanded version of Lyman's cuts (1979). Identifications were made with the aid of a comparative faunal type collection and the use of reference materials including Abbott (1968), Brown and Gustafson (1979), Cannon (1987), Gilbert (1973), Lyman (19<sup>2</sup>), Olsen (1964, 1979) and Schmid (1972).  
1977

The database contains fifteen named fields of information, including Provenience, Species, TNF, Wgt.(Kg), Bone, Part, Age, Cut, Mark, Burn, Gnaw, Wthr., Type, and MNU. A description of each field is provided below. The full name of each field is written out in bold while actual appearance in the database is in parentheses.

**Provenience.** Provides the unit coordinates, stratum and level information. The data was entered in provenience order.

**Species.** The common name of a species was used during identification ~~data~~ in order to facilitate the recognition of an animal by laymen. When a specimen could not be identified by species it was placed within the broader category of class.

**Total Number of Fragments (TNF).** Represents the actual number of fragments of bone or shell. All entries of bone and shell received a total number of fragment count.

**Weight, in Kilograms (Wgt.Kg).** All shell material was weighed in kilograms in addition to being counted.

**Bone.** This specifies skeletal element or bone being described. When an element could not be specifically identified, a general descriptor such as "longbone" was used. For shell the default is "shell".

**Part.** This indicates the portion of a bone or shell present. In addition, it distinguishes butchered from non-butchered bone specimens. Shell was described as whole, valve or fragment.

**Age.** Age at death was identified for skeletal elements when possible.

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**Meat Cuts (Cut).** Meat cuts were identified and recorded using an expanded version of Lyman's cuts. The illustrations are included here in the utilized codes.

**Cut Mark (Mark).** This describes the type of cutting action used to produce a meat cut, or cut marks present on the surface of an element.

**Burning (Burn).** Indicates the presence of heat exposure and when possible the type of burning that has occurred.

**Gnaw Marks (Gnaw).** Records the presence and type of gnaw marks observed on a specimen.

**Weathering (Wthr).** Indicates if a specimen exhibits signs of weathering.

**Type of MNU (Type).** Describes the type of Minimum Number of Units.

**Minimum Number of Units (MNU).** Minimum Number of Units count provides an adjusted count based on mended fragments. It was only used when a specific element was identified and described. For example, a distal radius would have an MNU count of 1. However 12 radius shaft fragments that do not mend will not receive an MNU count.

**Notefield.** This field was used for written comments.

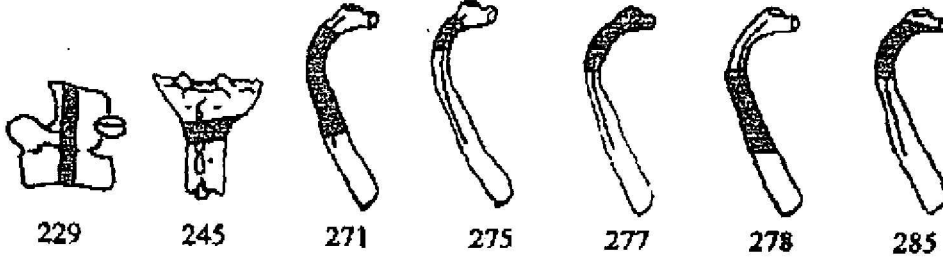
18

Utilized Codes

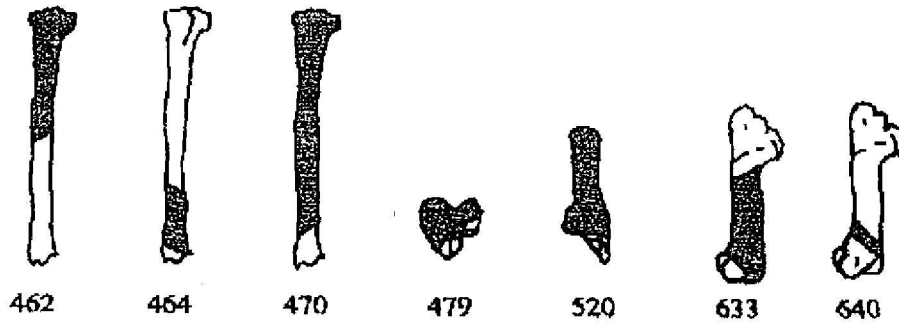
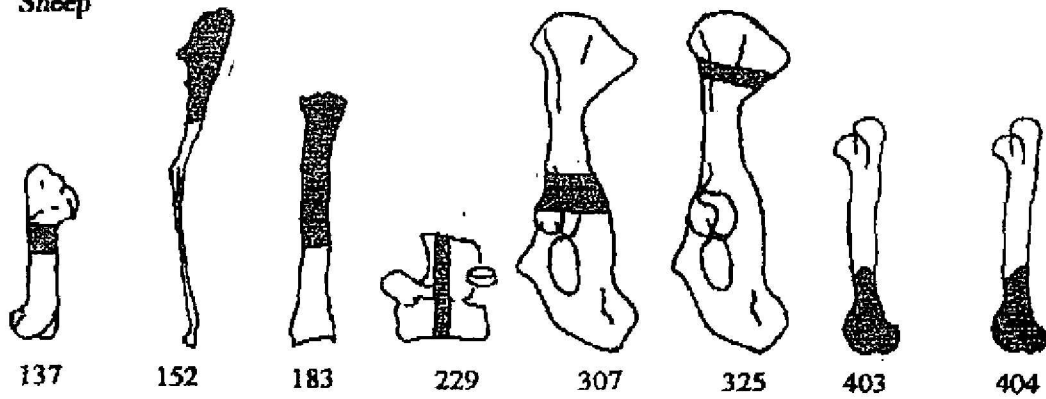
The utilized codes are necessary for the translation of the database. The provenience, species, TNF, Wgt.Kg., and MNU fields are self-explanatory. The remaining nine fields of information contain encoded information that is not immediately understood. The translations are provided below.

<b>Bone</b>	<b>Part</b>	<b>Burn</b>
1 Skull	1 Whole	1 Presence
7 Mandible	2 Fragment	3 Charred
13 Molar	3 Section	4 Calcined
30 Vertebra	4 Partial	50 Polished
31 Atlas	5 Shaft	
32 Axis	6 Proximal Fragment	<b>Gnaw</b>
33 Cervical Vertebra	7 Distal Fragment	10 Carnivore
34 Lumbar Vertebra	8 Proximal Section	
36 Thoracic Vertebra	9 Distal Section	<b>Weathering</b>
38 Rib	10 Proximal Epiphysis	1 Presence
39 Sacrum	11 Distal Epiphysis	50 Flaking
43 Costal Rib	41 Shaft Section	60 Stained
49 Sternum	50 Valve	
50 Scapula		
51 Clavicle	<b>Age</b>	<b>Type of MNU</b>
52 Coracoid	2 Neonate	2 Elements
59 RadioUlna	15 Unfused	3 Articulated Meat Cuts
60 Humerus	75 0-1 Year	4 Meat Cuts
61 Radius	76 1/4 Year Plus	
62 Ulna	78 1/2 Year Plus	
63 Carpal	84 1 1/2 Years Plus	
65 Carpometcarpus	86 2 Years Plus	
77 Phalange	91 Minus 3 Years	
89 Pelvis	92 3 1/2 Years Plus	
100 Femur	93 Minus 3 1/2 Years	
101 Tibia	94 4 Years Plus	
102 Fibula		
103 Patella	<b>Mark</b>	
106 Tibiotarsus	1 Sawed	
109 Tarsometatarsus	3 Cut Marks On Body	
112 Calcaneus	8 Chopped	
120 Longbone	12 Bisected	
152 Cleithrum	15 Sawed, Cut Marks On Body	
700 Shell	21 Chop And Cut Marks On Body	
710 Coral	51 Quartered	
998 Possibly Identifiable	60 Cleaved	
999 Unidentified		

**Meat Cuts**  
**Medium/Large Mammal**



**Sheep**



Sample Page

Shaft 21B Faunal Database  
 909 Kent Avenue  
 (provenience order)

Provenience	Species	TNF	Wgt. Kg	Bone	Part	Age	Cut	Mark	Burn	Gnaw	Wthr	Type	MNU	Note/field
09-8002.01	Oyster	3	0.018	700	2									
09-8002.01	Oyster	1	0.006	700	50									
09-8002.01	Oyster	12	0.467	700	1									One exhibits pry marks
09-8002.01	Oyster	9	0.045	700	2						50			
09-8002.01	Oyster	4	0.041	700	50						50			
09-8002.01	Oyster	7	0.158	700	1						50			
09-8002.01	Hard Shell Clam	41	1.234	700	1						50			Twenty exhibit pry marks
09-8002.01	Hard Shell Clam	100	0.658	700	50						50			
09-8002.01	Hard Shell Clam	228	1.293	700	2						50			Twenty-one exhibit pry marks
09-8002.01	Unidentified Material	3		999	2									Note says 'exoskeleton'
09-8002.01	Chicken	1		77	1						60	2	1	
09-8002.01	Chicken	1		77	1							2	1	Wing tip
09-8002.01	Unidentified Fish	4		30	1						60	2	4	
09-8002.01	Pig	1		13	1	75						2	1	
09-8002.01	Medium Mammal	1		38	2						60	2	1	
09-8002.01	Medium Mammal	2		38	8		277	8			60	2	2	
09-8002.01	Medium Mammal	2		38	3		278	8		10	60	4	1	Mend
09-8002.01	Medium Mammal	1		120	2						60			
09-8002.01	Large Mammal	1		120	3					10	60	4	1	
09-8002.01	Medium Mammal	1		30	3	15		51			60	4	1	
09-8002.01	Chicken	1		60	6						60	2	1	Copper Stained
09-8002.01	Medium Mammal	5		38	3		278	8			60	4	3	
09-8002.01	Cow	1		88	3	2	308	8			1	4	1	
09-8002.01	Medium Mammal	4		120	3						60	4	3	Steakbones 1/4"-1"Thick
09-8002.01	Sheep	1		88	2						60	2	1	
09-8002.01	Sheep	1		34	3		228	8			60	4	1	
09-8002.01	Medium Mammal	2		30	3			8			1	4	1	Possibly sacral
09-8002.01	Unidentified Mammal	2		999	3			8	1			4	1	
09-8002.01	Pig	1		100	9		413	1		10	1	4	1	
09-8002.01	Cow	3		101	10		478	1				4	1	Mend
09-8002.01	Cow	1		101	41		454	1	50			4	1	
09-8002.01	Cow	1		50	41		103	1				4	1	
09-8002.01	Cow	2		88	3		301	1			60	4	1	Mend
09-8002.01	Large Mammal	1		38	8		277	1			60	4	1	

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# Fax Transmittal Cover Sheet

**Date:** Tuesday, May 30, 1995

**Time:** 11:32:00 AM

**Number of Pages:** 17

89-119K

**To:** DIANE DALLAL

**Fax Number:** 1-212-748-8610

FSD

**From:** Marie-Lorraine Pipes

**Company:**

**Telephone Number:** 716-223-2473

**Fax Number:** 716-223-3350

**Note:**

**MARIE-LORRAINE PIPES**

12 Briar Way  
Fairport NY 14450

**F A X C O V E R S H E E T**

DATE:	May 30, 1995	TIME:	
TO:	Diane Dallal South Street Seaport Museum	PHONE:	[212] 748-8600
		FAX:	[212] 748-8610
FROM:	Sislie	Phone:	[716] 223-2473
		FAX:	[716] 223-3350
RE:	Shaft 21 B Project, Faunal Report		

Number of pages including cover sheet: 11

**Message**

Diane,

This FAX consists of the figures, tables, utilized codes and a sample page from the database. Please note that the methodology, utilized codes and database are included as part of the 'addendum'. Let me know if you want them split out as a separate appendix. Also the figures are draft paste ups. Th finals look better. The text was sent earlier. I'll call you later this afternoon.