

## ARTIFACT AND ECOFACTS ANALYSIS

The following sections present an overview of the analyses of the principal artifacts and ecofacts recovered from the features at the C. Kimmey Tenant Farm Site including ceramics, glass, personal artifacts, and faunal remains.

### Ceramics

A total of 92 minimum ceramic vessels were reconstructed from sherds collected from the features of C. Kimmey Tenant Farm Site. The sherds were divided into minimum vessels and dated using ware types, decoration styles, and maker's marks when available. Dates are based on the work by Godden (1964), Heavilin (1986), and Miller (1980, 1992).

Feature 31, the privy, contained the highest number of both ceramic and glass vessels. Features 175 and 105, trash pits to the north and south of the privy, also contained a significant number of vessels. The three features account for 74 percent of the total ceramic assemblage (Table 8). The remaining 24 vessels (26%) were distributed throughout the site with no more than three vessels per feature.

Sixty-six vessels (71%) are whiteware/white granite varieties (Plate 23). Most of these vessels are either teawares (29, or 44% of the white granites) or tablewares (32, or 48% of the white granites). Very few fall into either the kitchen (4, or 6%) or toilet ware (1, or 2%) categories. Decoration forms for whiteware/white granite vessels are listed in Table 9. Fourteen vessels (15%) are redwares, the next largest ware group. Most of these are unifacially glazed dark brown crocks or milk pans. Only one crock is bifacially glazed. Other forms include two slip decorated "pie pans" and one sherd of a refined redware teapot.

**TABLE 8**  
**Concentrations**  
**of Ceramic Vessels**

| FEATURE | NUMBER<br>OF VESSELS | PERCENTAGE<br>OF TOTAL |
|---------|----------------------|------------------------|
| 31      | 47                   | 51%                    |
| 175     | 11                   | 12%                    |
| 105     | 10                   | 11%                    |
| TOTAL   | 68                   | 74%                    |

**TABLE 9**  
**Decoration Styles**  
**in Whitewares/White Granites**

| DECORATION<br>STYLE | NUMBER<br>OF VESSELS | PERCENTAGE<br>OF WHITEWARES |
|---------------------|----------------------|-----------------------------|
| Undecorated         | 18                   | 27.3%                       |
| Molded              | 14                   | 21.2%                       |
| Shell edged         | 8                    | 12.1%                       |
| Painted             | 6                    | 9.1%                        |
| Printed             | 6                    | 9.1%                        |
| Dipt/annular        | 3                    | 4.5%                        |
| Decal               | 3                    | 4.5%                        |
| Luster              | 1                    | 1.5%                        |
| Not extant          | 7                    | 10.6%                       |
| TOTAL               | 66                   | 99.9%                       |

The remaining twelve vessels include various earthenwares and stonewares including four yellowware bowls with annular bands or molded decoration and an American Rockingham teapot lid. The remaining refined earthenwares include two pearlwares, a cup and a plate, and one Victorian majolica plate (Plate 24) from a pottery in Phoenixville, Pennsylvania. The rest of the vessels are utilitarian: two American stoneware crocks, one slip decorated stoneware crock, and a coarse earthenware crock. No porcelain was recovered from the features except for an electrical insulator and pieces from a toilet bowl. The vessels are summarized in Table 10.

TABLE 10  
Percentages of Ware Types

| WARE TYPE                    | NUMBER OF VESSELS | PERCENTAGE OF TOTAL |
|------------------------------|-------------------|---------------------|
| Whiteware/White granite      | 66                | 71.7%               |
| Pearlware                    | 2                 | 2.2%                |
| Victorian majolica           | 1                 | 1.1%                |
| Yellowware (inc. Rockingham) | 5                 | 5.4%                |
| Stoneware                    | 3                 | 3.3%                |
| Redware                      | 14                | 15.2%               |
| Coarse earthenware           | 1                 | 1.1%                |
| TOTAL                        | 92                | 100.0%              |

Thirty-two teawares, 35 percent of the total ceramic assemblage, were recovered from various features of the Kimmey Site. Twenty-three (72%) of these were recovered from Feature 31, the privy. Six (18%) were recovered from Feature 105. The remaining three were from Features 175, 73, and 56. The teaware assemblage totals 12 cups, 17 saucers, and three teapots. White granite stoneware varieties account for 30 (91%) of the teawares, with one transfer printed pearlware cup, one refined redware teapot, and one American Rockingham teapot accounted for the remaining nine percent. Decorations are listed in Table 11.

TABLE 11  
Teaware Summary

| FORM (WARE/DECORATION)  | NUMBER OF VESSELS | PERCENTAGE OF TEAS |
|-------------------------|-------------------|--------------------|
| Cups                    | 12                | 38%                |
| Whiteware/White granite |                   |                    |
| Undecorated             | 3                 |                    |
| Molded                  | 4                 |                    |
| Painted                 | 2                 |                    |
| Printed                 | 1                 |                    |
| Not extant              | 1                 |                    |
| Pearlware               |                   |                    |
| Painted                 | 1                 |                    |
| Saucers                 | 17                | 53%                |
| Whiteware/white granite |                   |                    |
| Undecorated             | 5                 |                    |
| Molded                  | 3                 |                    |
| Decal                   | 3                 |                    |
| Painted                 | 2                 |                    |
| Printed                 | 1                 |                    |
| Luster                  | 1                 |                    |
| Not extant              | 2                 |                    |
| Teapots                 | 3                 | 9%                 |
| American Rockingham     | 1                 |                    |
| Refined redware         | 1                 |                    |
| Whiteware/white granite | 1                 |                    |
| Flow printed--Mulberry  |                   |                    |
| TOTAL                   | 32                | 100.0%             |

The assemblage of tablewares from the Kimmey Site consists of 34 vessels (37% of total), which include 27 plates (79%), one platter (3%), three bakers (9%), two tureens (6%), and one covered dish (3%). Thirty-two of the tablewares are whiteware/ white granite varieties. Also found were a pearlware plate with the Willowware pattern and a Victorian majolica plate (Plate 24). Decorations for the tablewares are listed in Table 12. Thirteen items are either undecorated or too fragmentary to determine

**TABLE 12**  
**Decorations on Tablewares**

| FORM (WARE)                        | NUMBER<br>OF VESSELS |
|------------------------------------|----------------------|
| Plates (inc. soup & muffin plates) |                      |
| Whiteware/White granite            |                      |
| Undecorated                        | 8                    |
| Shell edged                        | 7                    |
| Molded                             | 5                    |
| Painted                            | 2                    |
| Printed                            | 2                    |
| Not extant                         | 1                    |
| Pearlware--Willowware              | 1                    |
| Victorian majolica                 |                      |
| Molded                             | 1                    |
| Platter                            |                      |
| Whiteware/white granite            |                      |
| Shell edged                        | 1                    |
| Bakers                             |                      |
| Whiteware/white granite            |                      |
| Undecorated                        | 1                    |
| Molded                             | 1                    |
| Not extant                         | 1                    |
| Tureens/covered dish               |                      |
| Whiteware/white granite            |                      |
| Printed                            | 1                    |
| Not extant                         | 2                    |
| <b>TOTAL</b>                       | <b>34</b>            |

the presence of any decoration. The remaining vessels are either molded, shell-edged, painted, or transfer printed. The tablewares were found in 10 different features. Nineteen of these items, or 56 percent, came from the privy, Feature 31. Five (15%) were recovered from Feature 175. The remaining tablewares (29%) were randomly scattered throughout the site.

Twenty-six vessels (27% of total) are kitchen, storage, or dairy varieties. Kitchen wares are represented by nine bowls of various wares (dipt or molded whitewares, yellowware, and redware), two redware pie pans, and one whiteware pitcher with annular bands. The storage and dairy categories are composed entirely of redwares and stonewares. Four undecorated redware milk pans comprise the dairy wares. Storage wares consist of five undecorated redware crocks and five stoneware crocks, two American blue/gray, one Bristol, and two unidentifiable. Six of the vessels in these categories were recovered from Feature 175. Five vessels were from Feature 31, and four were from Feature 105. The other vessels were scattered throughout the site.

### **Glass Artifacts**

One hundred minimum glass vessels were cataloged from the Kimmey Tenant House Site. Feature 31, the privy, yielded the majority of the glass vessels (Plate 25). Feature 12 contained 29 vessels and Feature 105 contained seven vessels. Fifty-four containers, tablewares, and lighting devices were recovered from Feature 31. The 10 remaining vessels came from Feature 5, which had three bottles, and Features 1, 2, 6, 9, 43, 56, and 83 which had one bottle each. Vessel forms include beverage bottles, medicine bottles, canning and food jars, general household or utility containers, tablewares (mostly tumblers), and lighting devices.

Eighty-two of the glass vessels recovered from the Kimmey Site have been classified as containers. The vessels are divided into liquor/wine, pop/mineral water, medicine, canning, food, and general household or utility. Thirteen bottles were identified as either wine, beer, or liquor bottles. The bottles consist of seven twentieth century varieties, including two modern "Rolling Rock" beer bottles and five other liquor bottles post-dating 1935 (Toulouse 1971:24-25, 342; Miller

TABLE 13  
Medicine Bottles

| NUMBER      | PRODUCT                           | METHOD<br>OF PRODUCTION | DATE RANGE |
|-------------|-----------------------------------|-------------------------|------------|
| Feature 31  |                                   |                         |            |
| K-H-G-70    | Unknown                           | Mold blown              | 1800-1917  |
| K-H-G-67    | Unknown                           | Mold blown              | 1750-1850  |
| K-H-G-6     | Dr. Jayne's Tonic Vermifuge       | Mold blown              | 1868-1900  |
| K-H-G-7     | Dr. Jayne's Tonic Vermifuge       | Mold blown              | 1868-1900  |
| K-H-G-9     | Richards and West Chemists        | Mold blown              | 1892-1914  |
| K-H-G-10    | Ayer (hair tonic)                 | Mold blown              | 1867-1914  |
| K-H-G-11    | L.M. Green                        | Mold blown              | 1870-1917  |
| K-H-G-54    | McDaniel Druggists                | Mold blown              | 1911-1920  |
| K-H-G-56    | Unknown                           | Mold blown              | 1864-1917  |
| K-H-G-58    | Unknown                           | Mold blown              | 1880-1917  |
| Feature 105 |                                   |                         |            |
| K-H-G-27    | Warner's Safe Cure                | Mold blown              | 1900-1910  |
| K-H-G-57    | Unknown                           | Mold blown              | 1892-1917  |
| K-H-G-73    | Unknown                           | Mold blown              | 1840-1917  |
| Feature 2   |                                   |                         |            |
| K-H-G-5     | Humphrey's Homeopathic/Veterinary | Machine made            | 1935-1938  |

1992). Two of the twentieth century bottles were recovered from the privy, Feature 31. The other five bottles came from Feature 12 and Feature 1. The remaining six bottles in the assemblage, including one bottle of "Mullers Beer" and one of "Old Quaker Rye", date prior to 1920 (Miller and Sullivan 1984:8). Three of the pre-1920 bottles were recovered from Feature 31 and two were recovered from Feature 105. The remaining bottle was recovered from Feature 43.

Sixteen containers have been identified as pop/mineral water bottles and most of the bottles are marked. The marked bottles include two Nehi bottles, two Coca-Cola bottles, one Pepsi bottle, one High Rock bottle, one 7-UP bottle, and one ginger ale bottle. All of the bottles were machine made, and thus post-date 1890 (Miller 1992). Most can be assigned beginning dates in the 1930's and 1940's (Toulouse 1971:403).

Fourteen medicine bottles were recovered from the site and are summarized in Table 13. Ten bottles were found in Feature 31, the privy. Eight of the bottles date between 1864 and 1920, based on production techniques and marks. Another bottle is empontilled and was manufactured in a two-piece mold, giving it a possible date range of 1810 to 1850 or 1860, before the snap case replaced empontilling as a way of holding bottles while the finish was formed. The final medicine bottle from the privy is too fragmentary to date exactly, and could have been made any time between 1800 and 1917 (Miller 1992; Jones and Sullivan 1985:46). The other four medicine bottles were recovered from Features 2 and 105. A bottle of "Humphrey's Homeopathic Veterinary"

TABLE 14  
Container Glassware

| NUMBER     | CONTAINER<br>(PRODUCT OR COMPANY) | METHOD<br>OF PRODUCTION | DATE RANGE |
|------------|-----------------------------------|-------------------------|------------|
| Feature 12 |                                   |                         |            |
| K-H-G-18   | Milk bottle                       | Machine made            | 1890-1975  |
| K-H-G-33   | Condiment (ketchup)               | Machine made            | 1920-1990  |
| K-H-G-36   | Jar (Hazel Atlas)                 | Machine made            | 1920-1964  |
| Feature 31 |                                   |                         |            |
| K-H-G-13   | Baking powder (Potter Parlin)     | Mold blown              | 1857-1917  |
| K-H-G-14   | Baking powder (Rumford)           | Mold blown              | 1857-1917  |
| K-H-G-15   | Baking powder (Potter Parlin)     | Mold blown              | 1857-1917  |
| K-H-G-75   | Baking powder                     | Mold blown              | 1857-1917  |
| K-H-G-97   | Jar (Reed Glass Co.)              | Machine made            | 1927-1956  |
| K-H-G-43   | Milk bottle                       | Machine made            | 1890-1975  |
| K-H-G-59   | Condiment                         | Machine made            | 1890-1990  |

References: Toulouse 1971:239-241, 432; Fike 1987:48

medicine, embossed with a horse's head, was found in Feature 2, the carriage house. The bottle dates between 1935 and 1938. Feature 105 contained a bottle of "Warner's Safe Cure" dating between 1900 and 1910 (Fike 1987:148, 167; Toulouse 1971:544). The other two medicine bottles from Features 2 and 105 could not be specifically identified, but are dated, based on their pattern of manufacture, from 1892-1917 and from 1840-1917 (Whitall, Tatum and Co. 1880).

Ten canning jars were recovered from Feature 31, the privy, and one from Feature 56. The jar from Feature 56 was a Ball "IDEAL" jar with a Lightning stopper post-dating 1904. The other canning jars, with the exception of Vessel 65, (which was machine made and dates from 1893 to 1980), date between 1858 and 1917. Three were manufactured by the Consolidated Fruit Jar Company, four are Hero jars and one is an "Atlas E-Z Seal" jar. No company association could be determined for the final two canning jars (Toulouse 1969:123, 249-150).

The food container category is composed of baking powder bottles, condiment containers, and milk bottles. A total of 10 food containers were recovered from Features 12 and 31. These containers are summarized in Table 14.

Seven chemical bottles were found at the C. Kimmey Tenant Farm Site. Four Clorox bottles with the following dates—1945 to 1954, 1945 to 1950, 1958 to 1962, and 1951 to 1954—were found in Features 12 and 31 (Collector's Guide to Clorox Bottles). Three bluing bottles, dating between 1840 and 1917, were recovered from Feature 31.

Ten bottles were assigned to the general utility category. These vessels cannot be assigned to a more specific category either because the shape indicates that they may have had one of several purposes or because the portion recovered is too small to determine function. Included in this category are two one-gallon jugs post-dating 1954 (Toulouse 1971:403), an unmarked square bottle dating between 1877 and 1917 (Miller 1992), and an oval bottle identical in form and technology to the bluing bottles discussed earlier, but lacked the traces of bluing which identified the other bottles. The rest of the general utility containers are fragmentary.

Twelve tableware vessels were recovered in the course of excavations. Eight of the vessels are pressed tumblers. Five tableware vessels are either panelled or fluted; two have decorations impressed in the base, an 1879 Morgan silver dollar pattern in one and a horseshoe in the other. The final tableware item simply has three raised lines running parallel to the rim. The collection also contains a cobalt blue rim which could be either a tumbler or a carafe. Only two of the remaining three tablewares were identifiable. One is the pressed base of a footed bowl; the other is a ribbed pitcher.

Five vessels were assigned to the lighting category including two headlights from Feature 12 and three lamp globes from Feature 31 (Privy). Based on evidence suggesting that lead was not used as a clarifying agent in the glass, the lamp globes was assigned a date in the range of 1864 to 1930. Several electric light bulb fragments were also recovered, but were not included in the vessel count.

## **Personal Artifacts**

The personal artifact category from the C. Kimmey Tenant Farm Site included toys such as marbles, cars and trucks, polyvinyl soldiers, a cellulose playing card, and a monkey from the game "Barrel of Monkeys." The date range of the toys indicates two generations of children. The first generation dates to the 1930's and 1940's, and the second dates to the late 1950's to early 1970's. The earlier set of toys consists of a white metal racing car, a rubber 1940's-style sedan and dumptruck, and six glass marbles. The later period of toys consists of polyvinyl soldiers from Marx's Battleground Playset, a polyvinyl horse from a "Cowboys and Indian" set, and four marbles.

Buckles are also present in the Kimmey assemblage and all but one are harness buckles. The unique buckle is from a pair of suspenders. The buttons in the assemblage offer little additional information and all date from 1840 to present.

One knife, two table spoons, and one soup spoon were recovered in the excavations. The plain one-piece stainless steel table knife was retrieved from the cow barn/storage shed (Feature 11). The two table spoons with acetate handles, dating to approximately 1936, were recovered from Feature 31. The silver-plated soup spoon from Feature 12 was made between 1890 and 1900 by the Victor Silver Company.

TABLE 15  
Taxa Represented in the Faunal Assemblage

| SPECIES                       | COMMON NAME         | # OF IDENTIFIED SPECIES | MINIMUM # OF INDIVIDUALS | # OF IDENTIFIED SPECIES/<br>MINIMUM # OF INDIVIDUALS | WEIGHT IN GRAMS |
|-------------------------------|---------------------|-------------------------|--------------------------|--|-----------------|
| <u>Bos taurus</u>             | Domestic cow        | 22                      | 2                        | 11   | 648.3           |
| <u>Sus scrofa</u>             | Domestic pig        | 6                       | 1                        | 6  | 47.0            |
| <u>Ovis/Capra</u>             | Domestic sheep/goat | 1                       | 1                        | 1  | 11.6            |
| <u>Canis familiaris</u>       | Domestic dog        | 174                     | 1                        | 174  | 1.3             |
| <u>Felis domesticus</u>       | Domestic cat        | 1                       | 1                        | 1  | 9.2             |
| <u>Didelphis virginiana</u>   | Opossum             | 4                       | 1                        | 4  | 2.0             |
| <u>Sylvilagus floridanus*</u> | Rabbit              | 3                       | 1                        | 3  | 0.8             |
| <u>Rattus norvegicus</u>      | Norway rat          | 2                       | 1                        | 2  | 4.9             |
| <u>Aves</u>                   | Bird                | 6                       | --                       | --   |                 |

\*Note: Sylvilagus floridanus (rabbit) only includes cultural bone; the natural rabbit skeleton (26 bones) is not included.

### Faunal Remains

The total faunal assemblage from the C. Kimmey Tenant Farm Site consisted of 264 individual bone fragments which, when mended, produced 255 fragments (Appendix IV). Of the 264 fragments, 26 are intrusive, limiting the cultural assemblage to 238 specimens. Each fragment was grouped by taxon, provenience, and modifications made to the bone. The taxa represented by the assemblage are cow, pig, sheep/goat, dog, cat, bird, opossum, rabbit, and rat (Table 15).

All bone was separated into small, medium, and large size categories. Next, mends were found and bone fragments were reconstructed where possible. Then, all fragments were identified using a comparative skeletal collection and reference guides (Sisson and Grossman 1953; Schmid 1972). In an attempt to conform to standards of zooarchaeology, this report follows, to the extent possible, the blueprint for faunal reports suggested by Grigson (1978). Reitz and Scarry (1985) suggest that every report should contain, at least, the minimum number of individuals (MNI), bone counts, and bone weights. All three of these measures are given in this report.

Artifacts recovered from the 14 features containing bone were of overlapping date ranges as previously discussed. Because the features are not contemporaneous, separation of the faunal material into temporally discrete groups was not possible. Hence, bone recovered from the C. Kimmey Tenant Farm Site is considered as one assemblage.

Each bone fragment was identified as specifically as possible as to species, genus, and mammal size (small, medium, or large). After identification, all bones were examined for modifications including evidence of cutting, gnawing, burning, and weathering. Bone weights were recorded, but due to the controversy regarding the accuracy of and approaches to bone/meat weights (Casteel 1978; Chaplin 1971; Crabtree 1985, 1990; Grayson 1979, 1981; Hesse and Wapnish

1985; Jolley 1983; Klein and Cruz-Urbe 1984; Lyman 1979), estimates of edible meat based on the bone weights were not made. Estimates of age were difficult, but were recorded when possible. Sex determination was not possible for any of the bones.

Measures of species abundance were calculated. The MNI was calculated by the “matching” method which considers size, age, sex, side, and portion of bone (Casteel 1977; Grigson 1978; Klein and Cruz-Urbe 1984). The number of identifiable specimens (NISP) was also recorded. It should be noted that neither MNI nor NISP is the actual number of individuals represented by an assemblage. MNI is the minimum, NISP the maximum, and the actual number of individuals represented by an assemblage is somewhere between the two measures (Jolley 1983; Klein and Cruz-Urbe 1984); therefore, both measures are included in the analysis of the C. Kimmey Tenant Farm Site faunal material (Table 15). NISP/MNI ratios were also calculated for each taxon (Table 15) to facilitate intersite comparisons and fragmentation interpretations (Klein and Cruz-Urbe 1984). In addition, percentages for each taxon were calculated.

The bone assemblage from the C. Kimmey Tenant Farm Site is small. The edible remains total 61 bones at most. Grayson (1981) and Reitz and Scarry (1985) argued that assemblages of less than 200 are too small to make statistical generalizations or accurately reflect the available meat. Barber (1981:162), however, points out that a small assemblage can provide important information such as “a minimum species utilized list as well as reveal cultural (subtleties) present.”

The way in which faunal assemblages reflect the economic status and the cost-efficiency practices of site occupants is not always consistent (Crabtree 1985, 1990; Crader 1984; Lyman 1987; Schultz and Gust 1983). The way in which the purchasing power and cost-efficiency practices of the C. Kimmey Tenant Farm Site occupants, as established by the documentary and artifactual evidence, is reflected in the faunal assemblage may provide insight into possibilities for future interpretations and generalizations. Also, examination of animals used, the particular cuts represented, and method of cooking and disposal may provide data significant for later comparisons among sites.

Before presenting the faunal data it is necessary to clarify abbreviations and terms used in this discussion, and the methods used here are consistent with the steps toward standardization of terminology in zooarchaeology suggested by Casteel and Grayson (1977). Throughout the text MNI and NISP are both used. MNI is used as defined by Chaplin (1971:70): “the minimum number of animals that the bones could have come from.” NISP is used as defined by Grayson (1984:17) where each “bone or tooth or fragment thereof (is) assigned to some taxonomic unit” and the total number of specimens for each taxon calculated. Two other terms used throughout this report, cultural and natural bones, are used as defined by Thomas (1971:366). The cultural assemblage consists of those bones or teeth which occur as a result of human events. The natural assemblage is bone occurring on the site as a result of other (non-human) events.

Cost-efficiency and cost rank are used when describing cuts of beef. Cost-efficiency as presented by Lyman (1987) is the amount of meat obtained from a particular cut of beef relative to its cost per pound. The obtained values can be ranked according to the cut that provides the most beef for a given amount of money, most cost-efficient, to the cut that provides the least amount of

beef for the same amount of money, least cost-efficient. Cost rank, as presented by Schultz and Gust (1983), ranks the cuts of beef by cost per pound alone. It is a relative price ranking system, the cheapest cut is ranked nine and the most expensive cut is ranked one.

Each taxon represented in the Kimmey faunal assemblage is discussed separately and in relation to the feature from which it was excavated. The way in which the specimens of each taxon contribute and relate to the entire assemblage is also discussed.

One hundred and seventy-four dog (Canis familiaris) bones representing 73 percent of the total cultural assemblage were recovered. All dog bones were from the same individual purposefully buried in Feature 58 as noted earlier. The dog skeleton was complete except for the left femur and left innominate. Based on a cephalic index of 56.2 the dog can be considered dolichocephalic, long-faced (Sisson and Grossman 1953), making the dog slightly smaller than a collie or German Shepherd. All bones were fused and all teeth were fully erupted indicating that at the time of death the dog was an adult. Because the dog burial does not reflect subsistence or consumption patterns, it is not included in most comparisons and calculations in this report.

One skull fragment of a cat (Felis domesticus) was recovered. The cat is considered cultural and makes up less than one percent of the total cultural assemblage and was less than one percent of the non-edible assemblage.

Twenty-nine rabbit (Sylvilagus floridanus) elements were recovered from Feature 9 (Appendix IV), an uncapped, two-chambered well, pump, and windmill which was partially filled. At the time of excavation, the feature was nearly eight feet deep. Of the 29 rabbit bones, 26 are from one individual and are considered natural rather than cultural. The rabbit is considered natural because the skeletal elements do not show any evidence of modification or alteration, most of the bones articulate, the skeleton was nearly complete, and the feature from which the skeleton was recovered is deep and steep enough to trap a rabbit or other small animal that might have fallen in. The intrusive rabbit skeleton is not a reflection of the lifeways of the site occupants but rather of the surrounding environment, and thus will not be considered further.

Three additional rabbit bones were also recovered from Feature 9: one fragment of right femur, one fragment of left femur, and one right mandible. The three bones are considered cultural because there is no evidence suggesting otherwise, the skeleton is incomplete, and the three elements are typical remains from a consumed rabbit. These three bones make up 1 percent of the total cultural assemblage and 5 percent of the edible assemblage. The MNI of cultural rabbit is one.

Twenty-two fragments of cow (Bos taurus) bone were recovered representing 9 percent of the cultural assemblage, 39 percent of the edible assemblage, and 63 percent of the edible domestic assemblage. All but three of the cow bones show evidence of butchering or cut marks. Five elements (from Features 4, 6, 109, and 31) are exfoliating, indicating that the bones were exposed for some time prior to burial (Behrensmeyer 1978; Johnson 1985). Two elements (from Features 6 and 12) show evidence of rodent gnawing which suggests that they also were exposed for some time prior to burial (Behrensmeyer 1978; Johnson 1985). The five features containing gnawed and

exfoliating bone (Features 4, 6, 12, 31, and 109) were either open for some period of time leaving bones and artifacts exposed or the bones and artifacts were deposited on the surface elsewhere then redeposited into the features.

Based on epiphyseal fusion, the cow elements recovered represent an MNI of two. At least five of the cow elements were immature, indicating that one cow was younger than 2.5 years old (Amorosi 1989). The immature bones include a lumbar vertebrae from Feature 12, radius from Feature 31, rib and tibia from Feature 4, and thoracic vertebrae from Feature 39 (Appendix IV). None of the bones have been burned, indicating that the meat was probably cooked by some means other than direct exposure to fire.

Six fragments of domestic pig (*Sus scrofa*) were recovered representing 3 percent of the cultural assemblage, 11 percent of the edible assemblage and 17 percent of the domestic edible assemblage. Mended, the six fragments form four limb elements and one tooth. All four limb elements show evidence of butchering, which will be discussed in detail later. One bone, (a radius from Feature 31) shows evidence of both gnawing and exfoliation, indicating that the bone had been on the surface for some period prior to burial (Behrensmeyer 1978; Johnson 1985). This bone, as well as the modified cow bone previously discussed, suggests that Feature 31 was either open for some period of time or material excavated from Feature 31 was a result of redeposition.

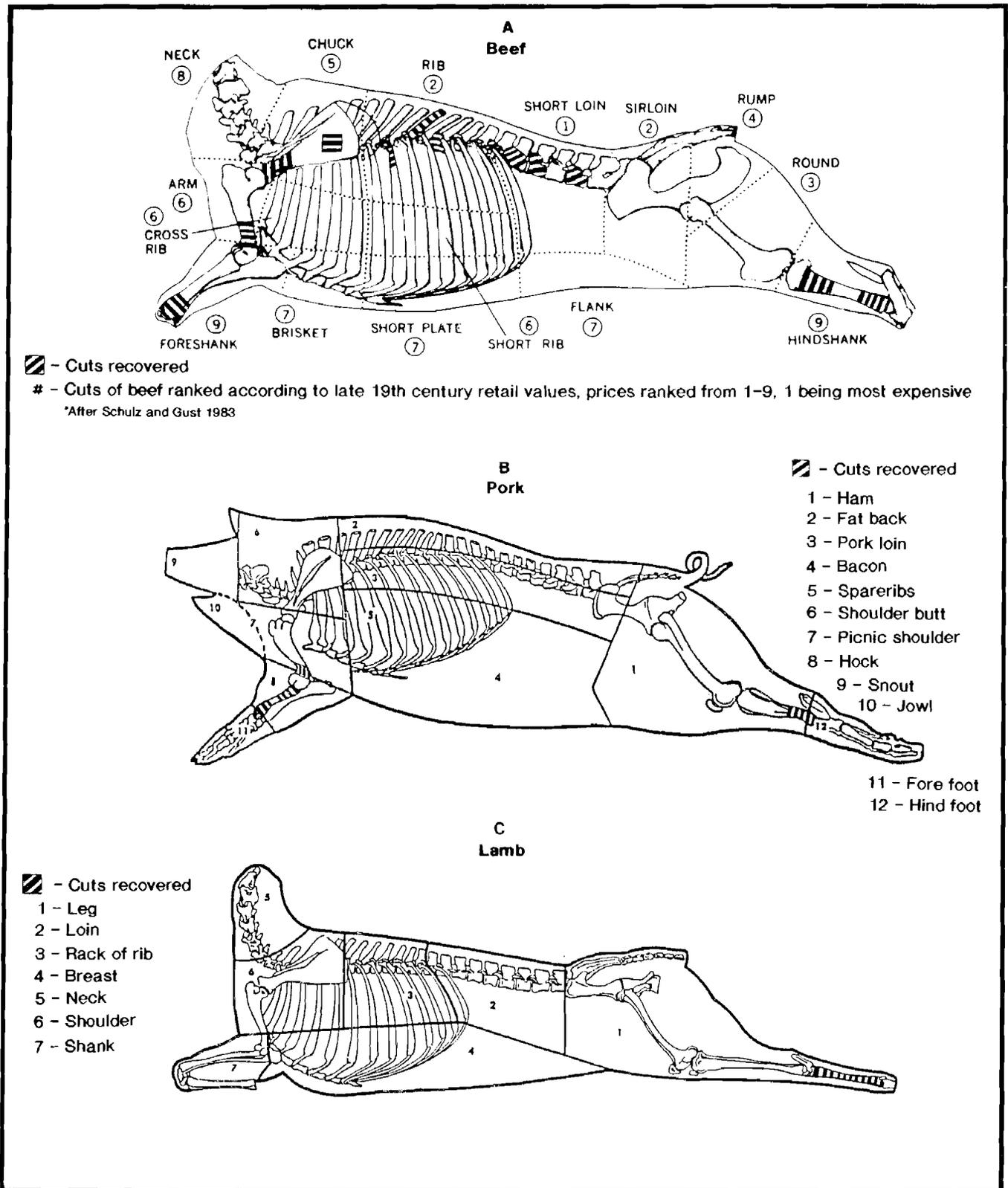
Bones diagnostic of age are a radius diaphysis from a pig less than 3.5 years old, a fused proximal radius from a pig older than one year, and a fused distal tibia from a pig older than two years (Bull and Payne 1982; Grigson 1982; Amorosi 1989). It is possible that all pig bones present are from a single pig two to three and a half years old, so the MNI for pig is one. Since none of the pig bones were burned, cooking was probably done by some means other than direct exposure to fire.

Due to the similarity in skeletal morphology (Reitz and Scarry 1985; Boessneck 1970) goat and sheep (*Capra/Ovis*) are grouped as one taxon. One goat/sheep element was recovered from the C. Kimmev Tenant Farm Site, a right metatarsal, representing less than 1 percent of the cultural assemblage and establishing an MNI of one. The metatarsal comprises 2 percent of the total edible remains and 3 percent of the domestic edible remains. The bone shows evidence of exposure in the form of rodent gnawing and exfoliation. Hence, the goat/sheep element, like the cow elements from Feature 4, suggest that Feature 4 was open for some period of time. Although there is no evidence of butchering, the goat/sheep element is part of a typical cut, a leg. Often the metatarsal is not cut when the leg is removed because the bones above and below the metatarsal are included in the piece of meat (Figure 32C). There is no evidence that the bone had been burned, suggesting that it was cooked by some means other than direct exposure to fire.

Four bone fragments of opossum (*Didelphis virginiana*), resulting in an MNI of one, were recovered and these bones contributed 2 percent to the cultural assemblage. All opossum bones were found in Feature 12 which is located beneath a concrete foundation (Feature 1). It is possible that the opossum entered a burrow beneath the foundation and died, which is not uncommon (Hamilton 1963). Although this may have been the case, no evidence shows that the bones are natural. It is assumed that the bones were discarded by the site occupants after the meat was consumed. The opossum bones are considered cultural and edible, comprising 7 percent of the edible assemblage. There were no modifications to the opossum bones.

FIGURE 32

# Beef, Pork, and Lamb Meat Cuts Recovered



The total number of rat (Rattus norvegicus) bones recovered from the site was two: one right innominate and one left mandible, comprising 1 percent of the total cultural assemblage and 1 percent of the non-edible assemblage. The bones were found in separate features (31 and 6 respectively) but have an MNI count of one. They are not considered a reflection of subsistence patterns or diet but are considered cultural because Norway rats tend to be found in areas of human occupation (Hamilton 1963).

Bird (Aves) was represented in the assemblage by six bone fragments, comprising 3 percent of the cultural assemblage and 11 percent of the edible assemblage. All bird bone was fragmentary and nondiagnostic. No modifications to the bone were observed.

Six bone fragments were identified as large mammal (Appendix IV). Although positive identification cannot be made, the six bones are most likely cow, an assumption based primarily on size and modification. These bones make up 3 percent of the cultural assemblage, 11 percent of the edible assemblage, and 17 percent of the domestic edible assemblage.

Five of the large mammal bones were sawn, and are therefore part of the edible assemblage. Three of the fragments (from Features 105, 31, 80) were burnt until calcined, a result of direct exposure to flames for a long period of time (Crader 1984). The large mammal bones found in Feature 31 were found with unburned bones, suggesting either that the burnt bones were burned prior to deposition, or that the feature was burned before all of the bones were deposited. It is most likely that burned bone along with unburned bone was deposited into Feature 31 as a means of waste disposal. It is unlikely that the bone was deposited into the feature then the feature burned, because Feature 31 is a privy. The implications based on large mammal bones is that Feature 31 was used for secondary deposition of wastes.

Eight bone fragments were from medium mammal. Five of the fragments show signs of modification. Two were burnt and three were sawn. The burned bone, both from Feature 31, were burnt until calcined, a result of direct exposure to flames for a long period of time (Crader 1984). Based on size and modifications, these eight fragments were probably from pig, goat/sheep, or deer. Since it is possible that the fragments are from deer they are not included in the domestic edible assemblage. Medium mammal makes up 3 percent of the cultural assemblage and 14 percent of the edible assemblage. Two fragments recovered were from small mammals. One of the fragments is a very worn unidentifiable tooth. Small mammal remains make up 1 percent of the cultural assemblage and cannot be considered part of the edible assemblage. Three bone fragments were identifiable only as mammal. The fragments are considered part of the cultural assemblage and contribute 2 percent to this assemblage. No modifications to the unidentifiable mammal fragments were evident.

A total of 25 elements, 11 percent of the total cultural assemblage, show evidence of butchering. Cow made up 52 percent (13 of the 25) of the total butchered bones, and 59 percent (13 of 22) of all cow bones were butchered. One cow element was chopped (a thoracic vertebrae), but not as a means of butchering, and the remaining 12 were sawn. The butchered cow elements

TABLE 16  
Cost Rank and Cost-Efficiency of Meat Cuts

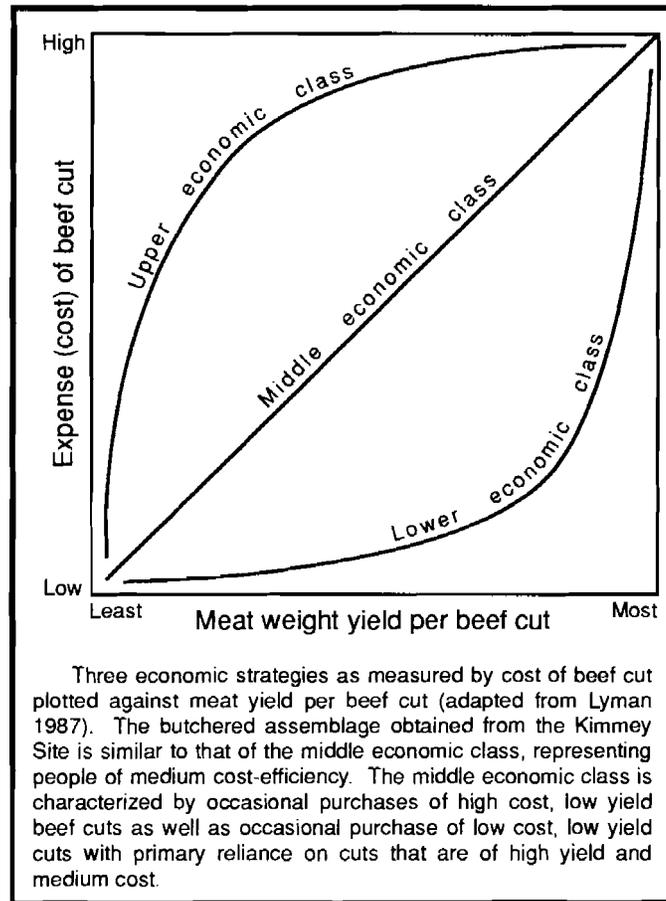
| ANIMAL     | BONE       | CUT              | COST RANK | COST-EFFICIENCY | FEATURE |
|------------|------------|------------------|-----------|-----------------|---------|
| Cow        | Humerus    | Arm/roast        | 6         | 18.8            | 12      |
| Cow        | L-vert     | Short loin       | 1         | 10.0            | 12      |
| Cow        | L-vert     | Short loin       | 1         | 10.0            | 102     |
| Cow        | Radius     | Forshank         | 9         | 17.5            | 31      |
| Cow        | Rib        | Rib              | 2         | 14.3            | 6       |
| Cow        | Rib        | Rib              | 2         | 14.3            | 4       |
| Cow        | Scapula    | Shoulder/arm     | 6         | 18.8            | 1       |
| Cow        | Scapula    | Chuck            | 5         | 25.4            | 31      |
| Cow        | Tibia      | Hindshank        | 9         | 26.7            | 4       |
| Cow        | Tibia      | Hindshank        | 9         | 26.7            | 31      |
| Pig        | Radius     | Forefoot         | --        | --              | 39      |
| Pig        | Humerus    | Forearm/shoulder | --        | --              | 12      |
| Pig        | Tibia      | Ham              | --        | --              | 6       |
| Pig        | Radius     | Hock             | --        | --              | 31      |
| Sheep/goat | Metapodial | Leg              | --        | --              | 4       |

evenly represent available beef cuts: one humerus, three lumbar vertebrae, two thoracic vertebrae, one radius, two ribs, two scapulae, and two tibia (Figure 32A). None of the butchered bones show any sign of being burnt.

There was no evidence of on-site butchering (e.g., no skull or cervical vertebrae fragments and only one foot and one ankle element) suggesting that the faunal assemblage is a result of accumulated food refuse, not butchering refuse (Lyman 1977). Hence, beef was either purchased elsewhere and brought onto the site in butchered form or raised on site and butchered elsewhere. The ankle element recovered was an astragalus, and the foot bone recovered was a phalanx. Neither showed signs of butchering or burning. The astragalus was possibly part of a larger cut of beef (hindshank) or perhaps used in stew or calf heel pie. Cow and calf foot elements were often made into puddings, pies and cowheel jelly (Crader 1984).

Cuts of beef represented by the butchered elements are listed in Table 16 with relative costs, cost-efficiency, and the features from which they were recovered. Five of the thirteen butchered elements (three lumbar vertebrae and two rib fragments) are from beef cuts that are of high cost rank (high relative price per pound). On a scale of one to nine, one being the most expensive, the five cuts are ranked one and two (Schultz and Gust 1983). Though the five cuts are most expensive they do not provide a lot of meat, so they rank toward the lower range of cost-efficiency. The works of Lyman (1987) ranks them 10.0 and 14.3 based on a scale of 5.6 to 30.0 with 5.6 being the least cost-efficient and 30.0 being most cost-efficient. The remaining eight elements are of low to medium cost rank (5, 6, and 9) and of high to medium cost-efficiency. Lyman (1987) ranks them 17.5 to 26.7, indicating that a relatively large amount of beef was obtained for a moderate to low amount of money (Table 16).

FIGURE 33  
 Plot of Beef Cost Against  
 Beef Yield Per Cut



Lyman (1987:66) argues that cost-efficiency is “directly interpreted as reflecting income level and purchasing power” but not necessarily status, as status includes income, occupation, prestige and other variables. Based on the pattern of beef cut purchases alone, the consumers of the cuts recovered from the C. Kimmey Tenant Farm Site may be considered of middle economic class (Figure 33) and of medium purchasing power (Lyman 1987). It should be noted, however, that the income level, purchasing power, and particularly economic status of the occupants of a site are more accurately reflected in the total documentary and archaeological evidence.

Pig bones also show evidence of butchering. Pig bones make up 20 percent of the total butchered bone (5 of the 25 specimens) and 83 percent of all pig bones were butchered (5 of the 6 specimens). Unlike cow, the butchered elements of pig do not evenly represent available cuts in that they are limited to limb elements. The butchered pig bones include one tibia, one humerus

consisting of two mended fragments, and two radii (Figure 32B). All four pig bones were sawn. In addition to being sawn, the humerus and a radius have several knife marks along the shaft, a result of cutting meat off the bone. None of the pig bones show any evidence of having been burned.

Cost-efficiency and relative price ranks were not available for pig or goat/sheep for this report. The cuts of pork and goat/sheep are listed in Table 16 along with the particular element cut and the feature from which the element was recovered. Even though it does not show evidence of butchering, the goat/sheep element represented is considered a cut because it is typically part of a larger cut, the leg (Figure 32C). All bones butchered to obtain a particular cut of meat had been sawn. Although one bone had been chopped and two bones show evidence of knife marks, these cutting techniques were done to deflesh the bone and are not considered a way of butchering. The presence of only saw marks as a butchering technique suggests a relatively formal butchering process (Inashima 1991; Stein 1988), which further supports the idea that domestic animals were butchered elsewhere and were then brought to the site for consumption.

Of the total cultural assemblage, two percent (5 out of 238 elements) are burnt. All were burnt to a complete white, calcined condition. Calcined bone results only when the bone is directly exposed to flames for an extended period of time, and does not occur when meat is merely cooked over an open flame (Crader 1984). The burnt bone is also broken (possibly by trampling) into small fragments, making identification difficult. Among the explanations for bone in this condition include the possibility that they could have been used as fuel, swept into hearths while cleaning, processed as garbage, or that they resulted from post-depositional fires (Reitz and Scarry 1985; Demeter and Smith 1992; Crader 1984). It cannot be determined whether the bone had been burnt to a lesser degree (as may occur in roasting) prior to becoming calcined, so the method of cooking

cannot be ascertained from the burnt bone. As mentioned previously, none of the identifiable cut bone was burnt, which implies cooking was done in a pot rather than by direct exposure to open flames (Crader 1984). It is also possible that the meat was smoked or salted (Reitz and Scarry 1985).

TABLE 17  
Oyster Shell Assemblage

| FEATURE NUMBER | SHELL QUANTITY | SHELL WEIGHT |
|----------------|----------------|--------------|
| 1              | 1              | 1.0 g        |
| 6              | --             | 44.4 g       |
| 31             | --             | 37.0 g       |
| 45             | --             | 4.0 g        |
| 56             | --             | 1.0 g        |
| 79             | --             | 2.0 g        |
| 102            | 7              | 230.0 g      |
| 105            | 16             | 896.0 g      |
| 106            | --             | 1.0 g        |
| 114            | --             | 10.0 g       |
| 129            | 1              | 7.0 g        |
| 145            | 4              | 59.5 g       |
| 146            | 3              | 54.0 g       |
| 162            | 2              | 49.7 g       |
| 175            | 27             | 439.0 g      |
| 183            | --             | 13.0 g       |

Oyster shells recovered from the Phase III investigations at the C. Kimmey Tenant Farm Site include 67 identifiable shells (Table 17). Results of analysis indicated that the oyster collection from the C. Kimmey Site cannot be compared to assemblages from other sites due to the poor condition and low quantity of the oyster shells. Therefore, meaningful analysis on shellfish utilization, foodways, and the effects of harvesting and marketing cannot be provided.

The faunal collections recovered from the Phase III excavations provide little information of the subsistence or consumption habits of the C. Kimmey Tenant Farm occupants through time. Due to the small size of the assemblage no comparisons could be made with assemblages from contemporary sites.

In conclusion, the faunal assemblage recovered from the C. Kimmey Tenant Farm Site does reveal several interesting points about the lifeways of the site's later occupants in spite of its small size. Based on the faunal assemblage, the occupants were probably of middle economic class with middle range purchasing power because they tended to purchase the most cost-efficient beef. They did not butcher animals on site but rather purchased meats from local merchants or markets. The domestic animals consumed were (in order of highest use) cow, pig and mutton. Bird was also consumed but is not identifiable as domestic or wild. Although primary reliance was on purchased domestic cuts, these meats were supplemented with wild game. The meats were most likely cooked in stews or by boiling, but other cooking methods were possibly employed as well. The limited amount of faunal remains suggests that the site occupants either did not readily discard refuse within site limits or the site was cleaned periodically in which case the material recovered is from later occupation.