

STATUS AND MEAT CONSUMPTION IN POMPEII:

*Diet and its Social Implications through the Analysis of
Ancient Primary Sources and Zooarchaeological Remains*

Vicki Moses

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Abstract

Access to luxury goods is an indication of belonging to the elite class. This access is evident in the archaeological record through many high-status materials, including access to prestigious meat. To understand the relationship of meat consumption to social status, this thesis examines various lines of evidence from the Roman site of Pompeii. This study identifies elite preferences through an analysis of ancient primary sources such as visual art and literature. To understand what non-elite people consumed, the faunal remains from a non-elite neighborhood of Pompeii were examined. From this research, it is evident that the non-elite diet consisted of many of the desirable cuts of animal enjoyed by the elite, and that the non-elite had access to prestigious animal types. However, the non-elite diet differed from that of the elite in that the non-elite consumed both desirable and undesirable cuts of meat; this meat was more often stewed than roasted; and the access to elite types of animals is much more limited. This work provides a greater understanding of how social status impacted the consumption of meat.

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I. Introduction

Despite the central role food played in Roman society and culture, there are many unknowns regarding everyday consumption of food. Textual evidence from the time does not create a complete picture of diet, as it reflects upper class biases or uses diet symbolically to express critiques of society. Past archaeological excavations have rarely collected faunal remains. Only recently have classical archaeologists begun to critically examine the role of social differences as expressed through food choices of ancient Romans. One city, however, gives an extraordinary opportunity to analyze food: Pompeii. Because of its ongoing excavations uncovering 400 years of stratified deposits, its exceptional preservation at the time of its destruction, and new research focusing on non-elite areas, Pompeii now gives researchers access to more complete information about food culture in Roman life. This thesis uses faunal analysis in conjunction with information from ancient primary sources to provide a new perspective on the diet of different social classes at Pompeii.

The ancient city of Pompeii was located in the region of Campania, in the Bay of Naples. Overlooking this area is a volcano, Mount Vesuvius. Eruptions of Mount Vesuvius provide more fertility in the region's soil, providing rich opportunities for food production. The volcano influenced more than the area's food production when the volcano's massive eruption in 79 CE completely covered the city.

At the time of its destruction, Pompeii was a typical, medium-sized Roman city (Cooley and Cooley 2004, Jashemski 2002: 15) that supported a population of about 12,000 (Cooley and Cooley 2004). Pompeii was a flourishing commercial city because of its location in the Bay of Naples. During the third and second centuries BCE, "Pompeii became

a prosperous, handsome city” (Jashemski 2002: 7). At this time the Hellenistic-influenced, rich architecture of Pompeii was built, including the forum, theater, and large villas. In 62 CE, earthquakes foreshadowed the eruption of Vesuvius and heavily damaged parts of the city. Some buildings had not been repaired by the time the 79 CE eruption destroyed the entire city by covering it with meters of volcanic ash.

Although it was disaster for the 1st century CE residents, this eruption left Pompeii in an excellent state of preservation until the city was rediscovered in the 18th century and excavations began. Now, “Pompeii gives us our most complete picture of life in Campania at the time of the eruption, for here we have a complete city preserved and approximately three-fourths excavated” (Jashemski 2002: 8). The results of faunal analysis of excavations from a range of socioeconomic areas of Pompeii can help us understand the diet of the inhabitants. The only aspect that differentiates the ancient city of Pompeii from other contemporaneous cities of Roman Italy is that it has been well excavated; the conclusions drawn from Pompeii can, to some degree, be extended to other cities in Roman Italy. This research serves in further understanding other medium-sized cities in Roman Italy, as the conclusions about fauna consumption in Pompeii will form a general model for other typical Roman cities that have not been so thoroughly excavated.

This thesis examines the differences in elite and non-elite diet in Pompeii. In order to do so, ancient primary sources are first analyzed to create a model of elite diet and non-elite diet as portrayed through different forms of textual evidence and visual art.

Unfortunately, there are many limitations to the ancient primary sources, especially in understanding non-elite diet, as most ancient primary sources are created from an elite perspective. Since the non-elite were not represented as commonly or from their own

perspective in ancient primary sources, it is necessary to look to the archaeological record to create a model for non-elite diet.

The primary source of information regarding the diet of non-elite residents of Pompeii is a case study of the faunal remains excavated in the Pompeii Archaeological Research Project: Porta Stabia (PARP:PS), directed by Steven Ellis. The project has thus far excavated much of one *insula*, or city block, located near an entertainment district just inside the Porta Stabia gate. The *insula* consists of workshops, restaurants, and non-elite residences. This thorough examination of one area reveals the interconnectedness of life within the *insula*, since the close quarters of the properties demanded interaction between its residents. The PARP:PS data is useful in understanding fauna in Pompeii for all its inhabitants not only because it is focused in a non-elite area, but also because one focus of the project is in “collecting and analysing the bioarchaeological record of [the *insula*] VIII.7.1-15” (Ellis and Devore 2009:2). These excavations provide a significant sample of faunal material that is being analyzed by University of Michigan graduate student, Emily Holt. Comparing the faunal material to previous research and ancient primary sources such as visual art and literature leads to conclusions about which taxa were included in diet. These sources provide information not only about which animals were eaten, but also about butchery and cooking methods and how these differed among social classes. All these factors in meat consumption are linked to socio-economic standing in Pompeii. Diet is an indicator of the everyday culture; studying faunal evidence in Pompeii shows not only what was consumed but reveals socio-cultural differences, as food is an important indicator of social identity and a marker of status (Crabtree 1990, Curet and Pestle 2010).

II. Previous Research

Social Identity and Food Consumption

Identifying faunal remains in archaeological contexts reveals more than simply which animals were consumed. Variety in food choice reveals differences in social position, economic class, and even political status (Curet and Pestle 2010:416). Food choices communicate standing in society, and distribution and consumption of high-status foods is meaningful in signaling this standing. Diet indicates privilege and power in society; access to elite foods reveals the ability to procure such goods, whether the elite are able to afford the higher cost of these goods or if their power allows them to control distribution. Since food choices signify identity, consumption of high-status meat signifies belonging to the elite group in society (Crabtree 1990: 171).

The criteria described by Curet and Pestle (2010) defines elite versus non-elite access to types of animals, preferences in age and cut, and types of preparation, which can be used in the analysis of the faunal remains of PARP:PS. Both economic and non-economic factors affect the desirability of a food, since choices in diet are not purely driven by economic value but also social value. Through cross-cultural tendencies and economic indicators, Curet and Pestle generated a list of eight qualities of high status food. Of these, the qualities that most clearly suggest prestige in the archaeological record are the rarity of a certain taxon or cut of meat, comparisons of abundance, diversity of taxa, presence of exotic goods, and presence of skeletal elements with a high caloric content (Curet and Pestle 2010: 417).

Roman Consumption through Faunal Remains and Literary Evidence

One study that serves as background for this thesis, Mackinnon (2004), accounts for both textual information and material remains. Mackinnon compares the bone assemblages reported from 97 sites across Roman Italy, with sites ranging from 500 BCE to 500 CE, broken into categories based on their period and their size. The Number of Identified Specimens (NISP) and Minimum Number of Individuals (MNI) from the sites reveal a vast majority of recovered bones belong to domesticated cattle, pigs, and sheep/goats. Sheep and goats are analyzed together because anatomical similarities in all but a few bones inhibit distinction between the two. The central region of Roman Italy, including Pompeii, tends to have more pig remains than cattle or sheep/goat. Other than these domesticates, Equids (horses, donkeys, and zebras), dogs, and (to a lesser extent) rodents are present in the archaeological record. Horsemeat was only consumed through necessity, and dogs were pets and watchdogs more than food; these animals would not normally constitute part of the diet (Mackinnon 2004, King 2002). Mackinnon notes that wild animals are more common in rural sites, but throughout the sample, wild animals become less prevalent over time. Mackinnon's study, focused on production and consumption of meat from mammalian sources, excludes dogs, cats, and rodents from his research and focused instead on the other mammals that were consumed by the Romans: cattle, sheep/goat, pig, and some wild/exotic species (including dormouse).

In addition to comparing taxa, Mackinnon also investigates butchery and cooking. Although some sites report evidence for butchery on wild animals, the majority of evidence for butchery comes from the three main domesticates. Cattle and sheep/goat butchery marks indicate cleavers were primarily used to separate areas of the body, most commonly

at articular ends of limb bones, and then knives were used to remove the meat (Mackinnon 2004: 166). Cuts on shafts indicate harvesting the marrow from the limb bones. Cattle remains from urban centers more frequently show signs of marrow processing than at rural sites, indicating the body of butchered animals was used more completely to attain the most nutrition possible from each animal (Mackinnon 2004:166). Pig butchery follows the patterns established for cattle and sheep/goats, but there are many more instances of cut marks on cranial elements (Mackinnon 2004:168). This indicates consumption of tongue, brain, muscle tissue, etc. from pigs' heads that does not occur for cattle or sheep/goats. Pig remains have more frequent cut marks and on a wider variety of body parts. Of particular interest are the frequent cut marks around the scapula, indicating the popularity of pig meat from this area. Pigs also show signs of a multitude of tools for butchery, whereas cattle and sheep/goats usually only show signs of cleavers and knives (Mackinnon 2004: 166-171).

Mackinnon's search for discussions of butchery in Roman texts yielded few results. Mention of removing hair and skin as well as bisecting pig longitudinally number among the references to butchery. Texts reveal that professional butchers slaughtered and butchered animals, and other professionals served as tradesmen to link the rural production sites to consumption in urban sites. Texts also explain that this profession was an ill-favored occupation, a reminder of the link between animal handling and social status (Mackinnon 2004: 173-175).

Evidence for cooking is more difficult to discern from the archaeological record than signs of butchery, since non-human impact can imitate signs of cooking methods. Few sites reported evidence of cooking. Spiral fragmentation indicates marrow extraction or bones

being boiled for broth, but carnivores and weathering can produce similar fragmentation. Burned bone can occur either from roasting or from environmental factors, although some marks can be positively determined from signs of prolonged or extreme heat. Few of these bones have been reported, but this lack of conclusively roasted bones may reflect collection and reporting at sites, not evidence that roasting was rare. Also, bone that is not burned does not always mean the meat was not roasted, if the bone itself was not in contact with heat. The inconsistent evidence of cooking reaffirms the need to integrate textual evidence with material remains to understand cooking in Roman Italy.

Textual evidence regarding cooking suggests the Romans' four main methods of meat preparation include "boiling (either alone or, more commonly, as part of a stew); roasting; frying; grilling; and baking (as in a casserole)" (Mackinnon 204: 175). From the number of recipes in Apicius' *Roman Cookery Book* and other sources, Mackinnon determines that boiling and roasting were the preferred methods of preparation (Mackinnon 2004: 175).

Analyzing Symbolic Food in Roman Literature and Art

While Mackinnon's research serves as a framework for utilizing faunal material and textual works, other scholars have investigated how ancient literature can be used as an indicator of diet and social status, paying particular attention to biases. One critical look at literature portraying both elite and non-elite extremes lies in Grimm's research (2007). She analyzes two commonly misinterpreted Roman texts, one used to typify the highest elite diet and the other to define the food of the peasant (Grimm 2007:84). Scholars agree that "Trimalchio's Dinner," a scene in the *Satyricon*, is satire showing the elite's contempt for the

other social classes. However, it is still used literally by many scholars to reconstruct banquets and diet of elite Romans (Grimm 2007:86). Grimm then juxtaposes this misuse with the *Moretium* that is cited as evidence for a vegetarian diet among the Roman Empire's non-elite due to the inability to afford meat (Grimm 2007:86). This work is not meant to accurately portray peasant life but to point to the idealization of its simplicity. In opposition to this literary view of rural life are the physical remains. The archaeological evidence that is available includes faunal remains from pig, sheep/goat, and cattle. Meat from these domestic animals was widespread throughout the Mediterranean and not limited to the elite, as the literature leads us to believe (Grimm 2007:86). Grimm thus highlights the inadequacy of literature in predicting diet.

Gowers (1997) cautions researchers against literal interpretations of texts. The setting of a work of fiction, whether it is a dinner party, festival, or prosaic peasant meal, is employed to reveal social trends, not just the actual food that was typically consumed in such settings (Gowers 1997: 28). The details authors chose to include often have complex meanings. Gowers also claims that the works “we loosely call non-fiction, Suetonius’ *Lives of the Emperors* or Pliny’s *Natural History*, for example, are just as biased, selective, and loaded, but in fiction the author has most control over his choice of material” (Gowers 1997: 12). In her work, Gowers uses textual evidence to analyze ambiguities and symbols in writing to determine which aspects of diet in literature can be taken literally and which serve symbolic or plot-driven purposes for a few ancient texts that use food symbolically.

Other than the problems with interpreting texts literally, other limitations to literature include applying data from literature that was not contemporaneous or represented different regions. Trends change over time and vary between regions, and so it

is important to analyze sources that most closely reflect the culture of the people being studied, both temporally and spatially. Jashemski and Meyer's publication (2002) contains catalogues of flora and fauna found in Pompeii through visual art as well as some information regarding archaeological evidence and textual evidence. This source is invaluable as it is specific to Pompeii. In both of the chapters regarding birds and mammals, the authors remark that the detail and accuracy of animals in visual art indicates that almost all of the animals portrayed were drawn from direct observation. Since the art was drawn from real subjects, scenes depicting meat consumption were likely drawn from real life. From the wall paintings of birds, Jashemski concludes that whole birds were hung by their feet before consumption. Anthony King contributes to the catalogue the analysis of mammals in visual art, literature, and the archaeological record (Jashemski and Meyer 2002). In literature, he notes that multi-course meals consisting mostly of meat characterized the elite diet. However, the fact that hare and boar are represented much more in literature than in the archaeological record serves as a reminder of the misleading nature of literature. King concludes from visual art, ancient authors, and archaeological remains that pig was the staple of the elite diet but that the role of pig in the diet of non-elite is unclear at this time.

Expectations for Elite and Non-elite Diet in Pompeii from Previous Research

The existing research serves as a base for this thesis. Firstly, it is crucial to consider how access to elite foods signifies social status and how the factors that give value to food can be applied to the archaeological remains at PARP:PS. If remains from PARP:PS correspond with one or more of the qualities of prestige food then they are considered high status food.

The qualities that are most evident in the archaeological record are the characteristics that will be analyzed in determination of the status of faunal remains, including rarity of a taxa or element, comparable abundance, diversity in taxa and skeletal element, exotic taxa, and skeletal elements with high caloric content.

Secondly, Mackinnon's work sets up expectations for the taxa, butchery, and cooking methods that should be encountered in the bone assemblage of PARP:PS. Following Mackinnon's observations about trends in Central Roman Italy, including sites in Pompeii he analyzed, the assemblage from PARP:PS should consist primarily of pig bone, followed by sheep/goat and then cattle. Of the ten Pompeian sites included in his study, almost all follow this trend (Mackinnon 2004:63). These studies represented both elite contexts (such as The House of Amarantus) and non-elite contexts (such as the Forum). The PARP:PS assemblage should include limb bones processed for marrow, cut marks often at articular ends, and more cut marks on pigs, especially in cranial elements and around scapulae. This thesis includes analysis of preparation methods while acknowledging Mackinnon's reservations about the limitations of evidence for cooking, especially in terms of the ways burn marks on bone can be misleading.

Thirdly, analyses of literature and visual art will allow these sources to be used as data while noting their limitations. In response to King's assertion that little is known about pig's role in the non-elite diet, the research of this thesis will help define the role of pig in the diet, as well as the other components of diet as a measure of social status. From the existing research on the social indications of fauna in Roman Italy, this thesis further analyzes meat consumption in Pompeii as it relates to social identity.

III. New Research on the Diet of Pompeii

Methodology

The previous research discussed above serves as a foundation for further analysis of the differences in meat consumption between elite and non-elite. Additional sources form expectations for elite and non-elite diet specific to Pompeii. To develop expectations for elite and non-elite diet in Pompeii, ancient Roman primary sources are examined. The variations in meat consumption between elite and non-elite diet as described in these ancient primary sources suggest how diet indicates social stratification for the inhabitants of Pompeii. Analysis of visual art, ancient literature, Apicius' *Roman Cookery Book*, and the sumptuary law *The Edict of Diocletian*, form expectations in diet from discussions of frequency of taxa, butchery methods, and cooking methods, as well as discussions of preference for different cuts or ages of animals. These expectations create a model as to which animals will be present in the archaeological record and which types of meat reflect elite or non-elite standing. The conclusions from these sources are then compared to the faunal material from PARP:PS.

With this research it is necessary to define both the bounds of this project and the limitations of each source. The sources chosen are samples of the available written documentation that constitute the best representations of the aspects of diet investigated. For each source, the demographic it represents is discussed as well as its other limitations. Mammal and bird are included in the data but not fish meat as data regarding fish remains from PARP:PS are not currently available for analysis in this thesis. Of the examples of animals in the ancient Roman sources being examined, only those examples that are directly linked to consumption are included. After compiling evidence from these sources,

the next section compares expectations derived from the sources to data from PARP:PS to understand elite versus non-elite diet and its implications for social stratifications.

Ancient Primary Sources

Investigating the ancient primary sources gives cultural insight into the perceived social value of meat in the words and art of the Romans. Most of these sources (visual art, non-fiction, and Apicius' recipes) reflect an elite diet, while fiction and ancient law present diet for a wider range of social class. These sources offer a unique perspective into how Romans experienced food culture.

Visual Art—Elite

Jashemski and Meyer (2002) provide evidence of diet using art as the source of data. This work's catalogue of birds and mammals present in Pompeii in art forms, such as wall paintings and sculpture, serves as a confirmation of taxa and butchery specific in Pompeii. However, the catalogue sometimes does not list every occurrence, just that they are present, such as indicating that hunting scenes are popular for wild boar. For the purpose of this investigation, the visual art of Pompeii indicates presence and not frequency of taxa (Table 1). Although many of the images show animals in domestic settings, such as a goose by the pool, the data is limited to only images that undeniably indicate consumption. The animals portrayed in visual art in Pompeii are usually drawn with enough accuracy to identify them to species. As discussed previously, the animals drawn in the context of consumption reveal both which animals were included in diet as well as their preparation. Visual art was a luxury enjoyed by the elite, so the artists' choices reflect choices in elite

diet. Visual art was located in private, elite dwellings, again focusing on elite choices in diet. In addition to the artists' elite perspective, the culturally important food scenes may emphasize feasts, not everyday consumption.

Table 1. Meat Consumption in Visual Art in Pompeii from Jashemski and Meyer (2002)

Taxon	Common Name	Elite/ Non-Elite	Wild/ Domestic	Butchery/ Cut	Category	Notes	Page
Aves	Thrush	Elite	Wild	No	Wall Painting	Falconry	358
Aves	Thrush	Elite?	Wild	No	Wall Painting	Netting	358
Aves	Thrush	Elite	Wild	Yes	Wall Painting	Hanging from feet in association with vegetables	363
Aves	Partridge	Elite	Wild	Yes	Wall Painting	Hanging dead partridge	362
Aves	Quince	Elite	Wild	Yes	Wall Painting	Hanging from game clip	364
Aves	Wigeon	Elite	Wild	Yes	Wall Painting	Multiple wigeons hanging upside down, offering from a hunter	364
Aves	Duck	Elite	Wild	Yes	Wall Painting	Four live mallards hang by their feet	364
Aves	Goose	Elite	Domestic	No	Wall Painting	Jashemski interprets goose to be domestic	365
Aves	Rock Dove	Elite	Wild	No	Wall Painting	Popular in wall paintings	372
Aves	Pigeon	Elite	Wild	No	Wall Painting	Popular in wall paintings	372
Aves	Quail	Elite	Wild	Yes	Wall Painting	Live, with bound feet	376
Aves	Peafowl	Elite	Wild	No	Wall Painting	On the walls of a Garum shop	389
Gallus	Chicken	Elite	Domestic	No	Wall Painting	Fighting and trophy	380
Bovidae	Cattle	Elite	Domestic	Yes	Wall Painting	Shows cow's head with butchery knife	409
Bovidae	Gazelle	Elite	Wild	No	Sculpture	Art depicting dogs hunting gazelles	427
Cervidae	Deer	Elite	Wild	No	Wall Painting, Sculpture	Scenes of deer being hunted common	418
Leporidae	Hare	Elite	Wild	Yes	Wall Painting	Hare nibbling grapes in association with a dead partridge	431
Leporidae	Hare	Elite	Wild	Yes	Wall Painting	2 samples of Hare suspended by its tied rear legs along with other game from a hunting trip	431

Taxon	Common Name	Elite/ Non-Elite	Wild/ Domestic	Butchery/ Cut	Category	Notes	Page
Suidae	Wild Boar	Elite	Wild	No	Wall Painting, Sculpture	Scenes of dogs hunting boar very common	411
Suidae	Wild Boar	Elite	Wild	No	Tomb Carving	Hunting scenes on marble relief	443
Suidae	Wild Boar	Elite	Wild	No	Wall Painting, Sculpture	Images of hunting wild boar abound	443
Suidae	Domestic Pig	Elite	Domestic	No	Wall Painting, Sculpture	Images of hunting abound	443
Suidae	Wild Boar	Elite	Wild	No	Bronze and lead weight, figurines	Fattened, juvenile pigs in art	443
Suidae	Domestic Pig	Elite	Domestic	Yes	Wall Painting, Sculpture	Many images of pigs or boars in still life art. They appear on platters, whole, possibly with tied feet, surrounded by other foods, sometimes meat (sausage), but also with head detached and meat on hooks or spit	444

The visual art in Pompeii trends heavily towards birds and wild animals as opposed to domestic mammals. Hunting scenes are common and include a multitude of birds as well as wild boar, gazelle, deer, hare (Figure 1, Figure 2). Complete killed birds are depicted

Figure 1. Image of a hare and a dead partridge (S. Jashemski 2002)



hanging by their feet. Whole domestic pig and wild boar are served on platters, sometimes surrounded by other meat and sometimes with the head detached. Suckling pig in bronze figurines shows the prestige of meat from juveniles. One image shows a cow being butchered with its head separated from the rest of the body. These images support an elite diet with a preference for wild

animals, a variety of birds, and juvenile animals. Butchery evidence in art supports elite

consumption of whole animals, especially birds. Butchery of cattle, wild boar, and domestic pig may have separated cranial and post-cranial elements.

Figure 2. Image of hunting dogs attacking a wild boar, (S. Jashemski 2002)



Ancient Non-Fiction—Elite

Non-fiction sources in literature provide social context and explanation for animal consumption in Roman Italy. For the purposes of this project, the ancient non-fiction featured in Jashemski and Meyer's (2002) catalogue is used because it provides information directly relevant to Pompeii (Table 2). With non-fiction, it is still necessary to take into account the author's choices and the potential elite bias. Since the topics include elite and non-elite subjects but the authors themselves wrote from an elite point of view, social status was not specified unless an activity was positively assigned to one group or both groups. The catalogue of animals includes many instances of managing animals, such as pigeon and dormouse, which are considered wild. Because of the ambiguity between wild and domestic animals, another category, "managed," is necessary. This is especially relevant to non-fiction sources, since many discuss the methods of managing wild animals. Managed animals are those that are not domesticated since people did not control their breeding, but people may have raised them, controlled their diet, or provided shelter.

Table 2. Meat Consumption in Non-Fiction in Pompeii
from Jashemski and Meyer (2002)

Taxon	Common Name	Elite/ Non-Elite	Wild/Domestic /Managed	Butchery/ Cut	Author	Notes	Page
Aves	Duck	Elite?	Managed	No	Aristotle, Columello	Describe raising ducks	364
Aves	Birds		Managed	No	Columella	Information about aviaries, including for waterfowl	365
Aves	Greylag Goose	Elite	Managed	No	Pliny	They serve as watchbirds and food, forcefed grain, popular for consumption	366
Aves	Domestic Pigeon		Managed	No	Pliny	Pliny discusses raising pigeons	373
Aves	Rock dove		Managed	No	Pliny	Pliny discusses raising pigeons	373
Aves	Stock dove		Managed	No	Pliny	Pliny discusses raising pigeons	373
Aves	Wood Pigeon	Elite	Managed	No	Columella	Advice for raising pigeons: don't force feed unless its for a feast	374
Aves	Coot		Managed	No	Columella	Discusses management	379
Aves	Helmeted Guinea fowl		Managed	No	Columella	Discusses management	384
Aves	Helmeted Guinea fowl		Managed	No	Pliny	Pliny says they have an "unpleasant pungent flavor" and also because of a myth some people do not eat them to respect the gods	384
Aves	Golden Oriole		Managed		Apicius	Also known as fig peckers	386
Aves	Peafowl	Elite	Managed	No	Pliny, Varro	Evidence of peafowl in literature, also talks about raising eggs (Varro)	389
Aves	Parrot	Elite	Unknown		Apicius	Apicius' recipe for parrots is, according to Jashemski, only for very elite and is to honor guests	394
Aves	Turtle Dove		Unknown		Martial	Martial values turtle doves	395
Aves	Thrush		Managed	No		Discusses management	399
Bovidae	Domestic Cattle		Domestic	No	Columella	Raising cattle	410
Leporidae	Brown Hare	Elite	Wild	No	Varro, Columella	Authors refer to Leporaria, or hunting grounds, that originally only had hare but expanded to hold more, they were fattened after taken from the Leporaria	431
Rodentia	Edible dormouse	Elite	Managed	No	Varro	References to raising and fattening dormice	428
Suidae	Domestic Pig	Elite/Non- Elite	Domestic	No	Varro, Columella	Varro discusses at length raising pig, Columella also gives advice for raising pig	445

Managed animals are sometimes difficult to define in ancient primary sources unless stated explicitly. Managed animals were desirable (since Romans put forth the effort to raise them) as well as available (since their numbers were increased through

management). Management also resulted in an increase in their nutritional value and thus worth. Non-fiction authors' descriptions of methodology for raising animals reveal their value and availability. The managed animals were in high demand as prestige goods. The animals mentioned mainly include a wide variety of birds. Cattle, pig, and hare are also discussed. These sources indicate that the elite diet contained not only domestic animals, with special methods for raising them, but also wild, managed animals, especially bird. Thirteen types of bird are mentioned while only four types of mammal are mentioned. This sample of sources included no information on butchery method, perhaps because of the negative attitude toward the trade (Mackinnon 2004: 175).

Ancient Fiction—Elite/Non-Elite

Non-fiction is less problematic in its reporting of consumption because it has a basis in observed behavior, but fiction does not adhere to these same requirements. Fiction serves as another form of art that portrays the culturally assigned value to food but with different limitations. While there are risks with using fiction as a literal guideline for everyday life in Roman Italy, fiction provides a social context for the consumption of meat that is at times difficult to infer from the archaeological record. Literature reflects the authors' choices in using food to satirize society, or for symbolism or entertainment, and thus is not always an accurate representation of diet. The sources that best illuminate the cultural value of food as well as consumption of meat in society are Petronius' "Trimalchio's Dinner," Juvenal's *Satire 5*, Martial's *Epigrams: Book 5*, and the fiction sources listed in Jashemski and Meyer (2002: 357-450). The context of each meat type reveals its desirability and prestige, and from this a determination can be made whether or not the

meat type was elite or non-elite. Even though some fiction depicts non-elite lifestyles, all authors were writing from an elite perspective, limiting the accuracy of their portrayals.

Of the meats that can be confidently identified as non-elite discussed in Martial’s *Epigrams*, almost all were limited to domestic animals, namely pig, but chicken and goat are also represented. Interestingly, the goat mentioned is juvenile, but still intended for a non-elite diet, showing that the preference for meat from juveniles was not limited to elite diet, though the ability to satisfy this preferences may have been more limited for the non-elite than for the elite. One mention of serving a magpie that died in a cage to unimportant guests is made, which is more of a commentary on food preparation and the importance of fresh meat than on type of meat. Discussion of meat in this literature sample leads to the expectation that non-elite contexts will contain mostly pig, followed by other domesticates such as goat and chicken.

The elite diet, described in all four of the sources for fiction, included a wide variety of meat choices. There is an emphasis on serving whole animals, such as wild boar and birds, as well as desirable cuts of meat, such as the loin and haunch, and organs such as liver. There are numerous courses with a variety of meat featured in each course. Sauces and time-consuming preparation add to the prestige of the meat available for elite consumption. In this sample of literature, 17 different types of animal are represented, with the vast majority being bird (as opposed to mammal) and wild (as opposed to domestic)(Table 3, Table 4). These animals represent the expectations for prestigious diets.

Table 3. Meat Consumption in Fiction for Elite and Non-Elite: Birds versus Mammals

Different Types of Bird Present	11	Chicken, Duck, Goose, Partridge, Peafowl, Pigeon, Quail, Quince, Rock Dove, Thrush, Wigeon
Different Types of Mammal Present	6	Cattle, Deer, Pig, Gazelle, Hare, Wild Boar

Table 4. Meat Consumption in Fiction for Elite and Non-Elite: Wild versus Domestic

Different Types of Wild (or possibly managed) Animals Represented	14	Deer, Duck, Gazelle, Goose, Hare, Partridge, Peafowl, Pigeon, Quail, Quince, Rock Dove, Thrush, Wigeon, Wild Boar
Different Types of Domestic Animals Present	3	Cattle, Chicken, Pig

Ancient Cookbook—Elite

A unique non-fiction source provides an illuminating look at culinary practices of the day. Apicius' *Do Re Coquinaria*, translated as *The Roman Cookery Book* (Flower and Rosenbaum 1958), is an invaluable source of information regarding animal consumption in Roman Italy as it is a collection of recipes written to be created and consumed. This source can help determine which foods were actually eaten while avoiding the symbolic biases of literature. The cookbook also explains food preparation with details that may not be preserved in the archaeological record. In order to analyze this source, each recipe involving meat is included in a table (Appendix 1). Each mention of meat is included. Sauces created for specific meats are separate from this table but still noted. Unspecified meat recipes are listed with the taxon as "Unknown." In addition to taxon represented, evidence for butchery, cooking, whether the meat is wild or domestic, and whether the recipe is elite is included.

This utilitarian cookbook was originally for an elite audience; however, the later edition of the cookbook included non-elite recipes as well. The mixed later edition dating to the 4th to 5th century CE is the only existing edition of Apicius' cookbook, so the line between gourmet and non-elite recipes in the book is not exact. Most recipes with meat are undeniably elite, judging from the number of ingredients or costliness of ingredients. For example, if a recipe contains peacock, a very expensive food, the recipe is categorized as elite. If a recipe is not easily distinguishable as elite or non-elite, the recipe is included in

the table as “Unknown” (Appendix 1). Every mention of meat is listed in the table and a separate chart (Figure 3, 4) is included for sauces for specific kinds of meat but not listing the meat as an ingredient.

Figure 3. Number of Recipes for Each Taxon in Apicius’ *Roman Cookery Book*

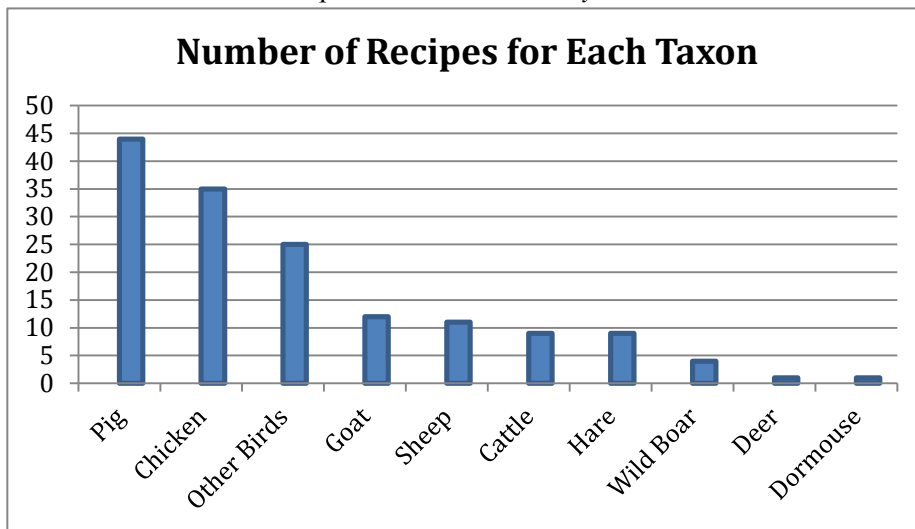
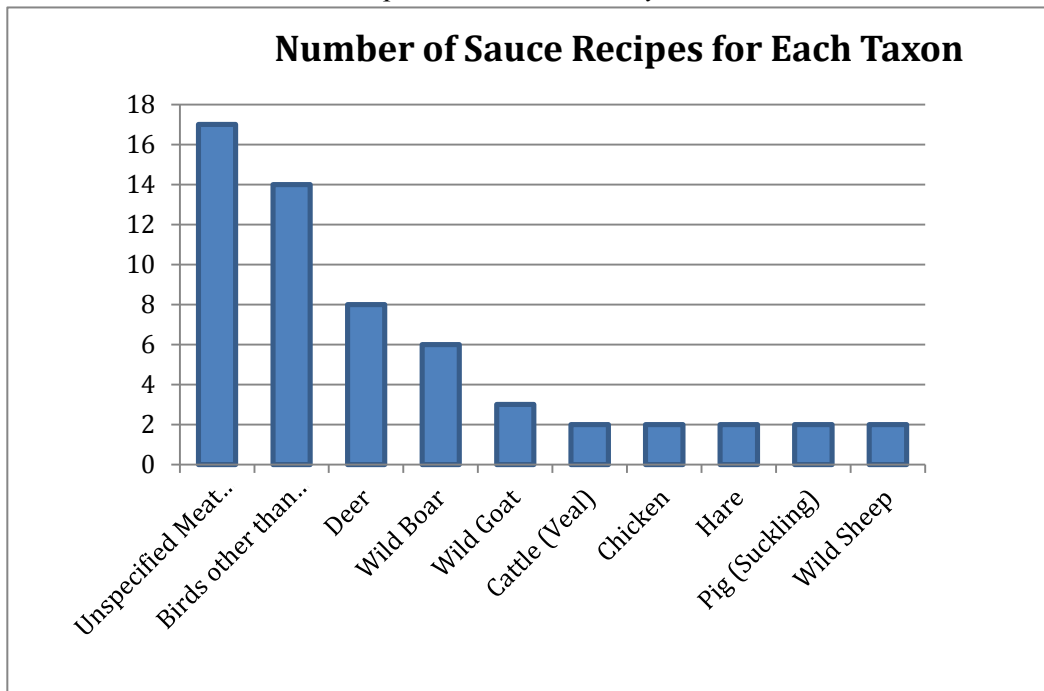


Figure 4. Number of Sauce Recipes for Each Taxon in Apicius’ *Roman Cookery Book*



This edition of the cookbook is not only a mixture of elite and non-elite recipes, it is also from several centuries later than Pompeii's habitation, further limiting its application to the diet of Pompeii. Taste in food or food availability may have changed from the time of Pompeii's occupation to the time of this edition. Despite its limitations, this source provides a unique perspective on the usage of meat from its frequency of recipes, the prestige of meat from its usage in gourmet recipes, and meat preparation.

From the information collected in Apicius' cookbook, pig meat is the most frequently used meat in recipes (Figure 3). Following pig meat in frequency is chicken meat. After these two domesticates is a substantial drop in frequency before all birds (other than chicken), goat, sheep, hare, and cattle. Although mentioned, the infrequency of recipes for wild boar, dormouse, and deer. These recipes indicate that mammals were more common than birds and domestic animals more common than wild (Figure 5, Figure 6).

Figure 5. Comparison of Frequency of Bird versus Mammal Recipes in Apicius' *Roman Cookery Book*

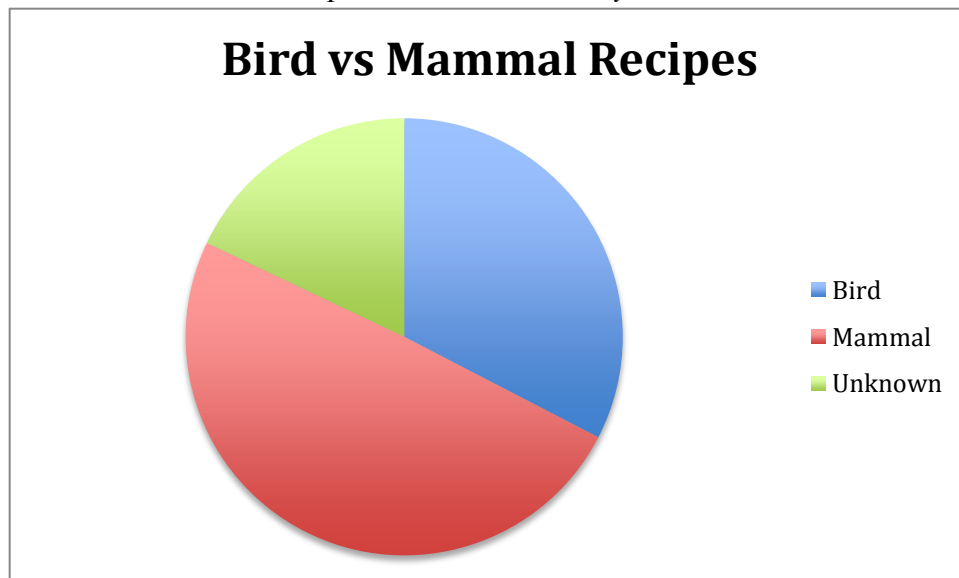
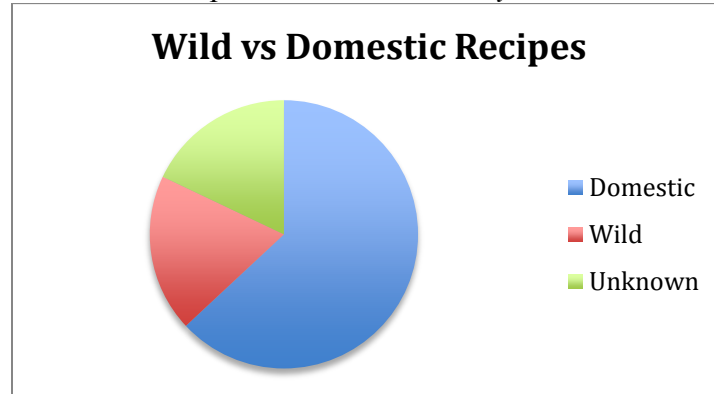


Figure 6. Comparison of Frequency of Wild versus Domestic Recipes in Apicius' *Roman Cookery Book*



Juveniles make up a surprisingly large number of recipes, at almost a quarter (23.4%) of the recipes. The preference for juvenile meat is evident again in the number of sauces for juvenile meat, such as sauces for veal and suckling pig (Figure 4). Birds and wild animals are represented in the sauces more than in recipes (Figure 4). This may reflect an increase in status when a food was prepared with a sauce since the recipe would require more resources to prepare.

Ancient Law—Elite/Non-Elite

Another non-fiction source providing support for differences in desirability and availability comes from the *dictum De Pretiis Rerum Venalium*, translated as the *Edict of Diocletian* (Murray 1826). Issued in 301 CE, it listed the standard prices of goods in Roman Italy. Although the *Edict* is not exactly contemporaneous with Pompeii's occupancy (c. 4th century BCE to 79 CE), it ranks the perceived values of foods for ancient Romans. The costs listed (Table 5) would not have matched the cost at the time of Pompeii's habitation, but the comparative perceived value would likely remain stable over time in the absence of strong cultural influences.

Table 5. *Edict of Diocletian* Rankings from Maximum Price to Minimum Price

Price (Denarii)	Taxon	Common Name	Wild/Domestic/Managed	Type of Food	Amount
250	Aves	Pheasant	Managed	Fatted Cock Pheasant	Whole Animal
200	Aves	Pheasant	Managed	Fatted Hen Pheasant	Whole Animal
200	Aves	Goose	Managed	Fatted Goose	Whole Animal
150	Leporidae	Hare	Wild	Hare	Whole Animal
125	Aves	Pheasant	Wild	Wild Cock Pheasant	Whole Animal
100	Aves	Goose	Wild	Goose Not Fatted	Whole Animal
60	Gallus	Chicken	Domestic	Chicken	Whole Animal
60	Aves	Thrushes	Wild	Thrush	Whole Animal
40	Leporidae	Rabbit	Wild	Rabbit	Whole Animal
30	Aves	Partridge	Wild	Partridge	Whole Animal
24	Suidae	Domestic Pig	Domestic	Vulva (udder, etc. of sow-pig)	one Italian pound
24	Aves	Pigeon	Managed	Pigeon	Whole Animal
20	Suidae	Domestic Pig	Domestic	Sumen (udder, etc. of breeding sow)	one Italian pound
20	Suidae	Domestic Pig	Domestic	Bacon Ham of Westphalia or the Cerdagne	one Italian pound
20	Suidae	Domestic Pig	Domestic	Bacon Ham of the Marsi	one Italian pound
20	Aves	Starlings	Wild	Starlings	10 Whole Animals
20	Aves	Wood Pigeon	Wild/Managed	Wood Pigeon	Whole Animal
20	Aves	Grouse	Wild	Grouse	Whole Animal
20	Aves	Duck	Wild/Managed	Duck	Whole Animal
20	Aves	Quail	Wild	Quail	Whole Animal
16	Suidae	Domestic Pig	Domestic	Ficatum (hog's liver enlarged by fattening)	one Italian pound
16	Suidae	Domestic Pig	Domestic	Lucanicae (seasoned and smoked sausages) of pork	one Italian pound
16	Suidae	Wild Boar	Wild	Flesh	one Italian pound
16	Suidae	Domestic Pig	Domestic	Suckling Pig (Juvenile)	one Italian pound
16	Aves	Turtle Dove	Managed	Turtle Dove (Two listed, unclear how they differ in original)	Whole Animal
12	Suidae	Domestic Pig	Domestic	Pork	one Italian pound
12	Cervidae	Deer	Wild	Stag Flesh	one Italian pound
12	Cervidae	Deer	Wild	Flesh of the Buck, Doe, or Roe	one Italian pound
12	Ovis	Sheep	Domestic	Lamb (Juvenile)	one Italian pound
12	Capra	Goat	Domestic	Kid (Juvenile)	one Italian pound
12	Aves	Turtle Dove	Managed	Turtle Dove (Two listed, unclear how they differ in original)	Whole Animal
10	Bovidae	Cattle	Domestic	Iscia of Beef	one Italian pound
10	Bovidae	Cattle	Domestic	Lucanicae (seasoned and smoked sausages) of Beef	one Italian pound
8	Bovidae	Cattle	Domestic	Beef	one Italian pound

Price (Denarii)	Taxon	Common Name	Wild/Domestic/Managed	Type of Food	Amount
8	Capra	Goat	Domestic	Goat's Flesh or Mutton	one Italian pound
4	Suidae	Domestic Pig	Domestic	Pig's Feet	one Italian pound
2	Suidae	Domestic Pig	Domestic	An Iscium (or fresh sausage), made of pork	one ounce

The *Edict* serves in creating clear-cut rankings of the value of meat, for both non-elite and elite diet. It is possible, however, that certain food types dramatically changed in cultural value between the time of Pompeii's occupation and the *Edict of Diocletian*. Despite these limitations, this source is valuable as it is not subjective but the law; the information in it is not symbolic or biased but applicable to all people of Roman Italy equally.

Unfortunately, the amounts of food listed are not always comparable as some are listed per Italian pound and others as whole animals. Without knowing the weights of whole animals, it is difficult to compare them with items on the *Edict* for which weight is given. Another limitation of the list is in determining whether the meat is wild or managed. Only a few animals specify that they were fattened, and thus managed, but many of the other taxa included in the *Edict* are known to be managed from other sources, such as the ancient non-fiction discussed above. This makes distinction between wild and managed animals difficult. The animals considered domestic in this research include pig, sheep, goat, cattle, and chicken.

In order to highlight the relative monetary value of each type of meat, two tables are necessary: one lists the data in order from most expensive listing to least expensive (Table 5) and the other ranking the food price by sections of comparable units of weight (Appendix 2). Of the meat listed by Italian pound, pork and deer meat are listed at 12 denarii, with cattle and goat costing slightly less. The most expensive item on the list

ranked per Italian pound is pig vulva. Suckling pig costs slightly more than pork, while lamb and kid cost less than pork. In contrast to the relatively consistent prices of domestic pig, cattle, goat, wild boar, and deer, are the prices of birds, both wild and managed. They range from a whole fatted cock pheasant at 250 denarii to the wild Turtle Dove at 12 denarii. It is evident from this *Edict* that managed, or fattened, birds are more valuable than wild birds. The difference in prices between birds and mammals is notable.

Summary of Findings from Ancient Primary Sources

The analysis of ancient primary sources creates a model for elite and non-elite Roman diet. Most of these sources are written from an elite perspective and indicate which meat was the most prestigious. These sources create expectations regarding meat consumption among the elite. Firstly, there is an emphasis on bird consumption. Visual art and literature (both fiction and non-fiction) depict many more birds than mammals. There are a wide variety of species represented. From the *Edict of Diocletian*, it is evident that managed birds are the most valuable meat. In addition to the value of managed animals, the *Edict* shows higher value of wild animals. The prestige of wild animals is also reflected in visual art and literature as they depict a higher number of wild species than domestic in diet. For both wild and domestic animals, all ancient primary sources (visual art, literature, Apicius' cookbook, and the *Edict of Diocletian*) show whole animals in the elite diet. All these sources depict the high value of juvenile meat. The frequency of juvenile recipes in Apicius' recipes suggests that about a quarter of diet contained juvenile animals. The *Edict of Diocletian* and Apicius' cookbook are most helpful in determining the most desirable cuts of meat: loin, haunch, and rib meat.

While visual art and literature portray a diet with many birds and wild animals, Apicius' cookbook portrays a slightly different diet. While these items are included in this source, there is a much higher number of recipes for domestic animals, with pig being the most common, followed by chicken recipes. The infrequency of wild boar, dormouse, and deer indicates that these taxa were rarely consumed. Mammal recipes are more common than bird. The frequency of recipes suggests that elite diet included large amounts of pig and chicken meat but prepared in a variety of ways and with other types of meat mixed into the diet as well. Although all these sources portray elite diet, the different sources also reflect levels of prestige. The diet indicated by visual art and literature is an extreme of elite diet while Apicius' cookbook, although still gourmet, is a more utilitarian reflection of elite diet.

The information about non-elite diet from ancient primary sources is much more limited. Literature and the *Edict of Diocletian* suggest a non-elite diet with few birds, few wild animals, and less costly cuts of meat (such as pig feet). The non-elite relied on domesticates for the majority of their meat.

Unfortunately, the limitations from these sources make understanding non-elite diet very difficult, as this information is usually through the eyes of the elite. The best way to gain knowledge about non-elite diet is through the archaeological record and through collection of faunal remains. New excavations at PARP:PS make this analysis possible.

Case Study: Findings from PARP:PS Faunal Material

The expectations formed from the previous sources discuss several aspects of diet, but often from an elite perspective. Ultimately, the best way to understand non-elite diet is

to use material remains. A comparison between the faunal remains from a non-elite archaeological context with the model for non-elite and elite diet generated from ancient primary sources highlights the differences in the diets of people from different social classes at Pompeii. This research also examines how prestigious foods were used to mark belonging to a group or used to emulate an elite group's diet.

For the first time, faunal remains from a non-elite neighborhood in Pompeii are available so that this comparison of elite and non-elite diet is possible. The Pompeii Archaeological Research Project: Porta Stabia (PARP:PS) excavated 30 trenches in and around one non-elite *insula*, or city block, that represent a variety of activity areas, including workshops, restaurants, and residences. The excavations collected material spanning from the 2nd century BCE until Pompeii's destruction in 79 CE. One focus of the project is the collection of bioarchaeological materials, and this collection has thus far yielded almost 3,500 identified and catalogued animal remains from throughout the site. These specimens serve as the data representing non-elite diet in Pompeii. The animal remains come from many different contexts, including construction fills, habitation areas, drains, etc. and so represent animal bones used in many different ways. These contexts are all included in the analysis as they give indications of which taxa were present. Bones with clear signs of processing for marrow, burning, or butchery are analyzed separately, as they are most strongly linked to diet.

While faunal analysis from material remains allows researchers to avoid many of the pitfalls encountered with ancient primary sources, faunal analysis is still subject to many limitations. First of these limitations are the taphonomic processes that affect the remains after the animal dies. These processes influence the preservation and modification

of remains and can be environmental, such as water flow, or cultural, such as butchery or marrow processing. Often, the location of animal bones when excavated is not the location where the remains started after human use or natural death.

Carnivores are responsible for much of the movement and modification of bones. This destruction is distinguishable from human modification but must be considered in analysis of faunal remains (Binford 1981). In Pompeii, scavenging is the most problematic taphonomic process, as evidenced by the high number of specimens with carnivore or rodent gnaw marks (Mackinnon 2004:21). If carnivores subsequently changed the specimen's location, this can influence the determination of where humans used animal bones. Where humans used bones helps determine if the bones were from animals that were consumed; if bones are part of meal remains versus a construction fill, for example, the interpretation of their role in diet may change. Taphonomic processes not only change location of remains but often also destroy more fragile bones. Faunal collections are often teeth and foot bone biased because these durable bones tend to preserve more than other elements (Mackinnon 2004:21).

Archaeologists have no control over taphonomic processes beyond acknowledging their possible effects on their conclusions. During excavation, however, archaeologists do have control over the collection process (Mackinnon 2004:21). Recovering all animal bone is difficult to do, as some bones or fragment of bone are very small and can only be found through sifting the excavated sediment. If the screen size is too large, smaller animal bones will not be collected, making accurate representations of small bird and rodent frequencies or frequencies of small bones from larger animals difficult. In PARP:PS, special care was taken in recovery of bones through sifting and flotation, but it is still important to

acknowledge the risks of collection biases (Ellis 2011). In the collection process, it is also crucial to note the source of the animal bones as different contexts will reflect different human usages of animal bones, such as the inclusion of animal remains in construction fills.

After collection, faunal remains must be identified. This again can slant the evidence since some types of bones are more easily identified to taxa. For example, teeth are very diagnostic and often lead to positive identification, but rib fragments are usually unidentifiable except to general size categories (Mackinnon 2004:22). It is also important to note that the absence of identifiable parts of an animal does not necessarily mean the animal was absent.

While these limitations affect the faunal remains in the catalogue, this data is invaluable in understanding the relationship between diet and class. This research analyzes faunal material most likely included in diet. Although there are still many hundreds of specimens to identify from the site, the most current catalogue contains 3,481 identified bones. Among these entries are some non-relevant taxa, including horse, dog, human (one tooth), fish, frog, lizard, mollusk, and turtle. Horse was only consumed when absolutely necessary (Mackinnon 2004). Although there are debates about whether or not dogs were used as a food source, they are generally not believed to be part of diet (Mackinnon 2004). Fish, frog, turtle, and mollusk may have been consumed; however, the small sample size and the little existing research about these types of animals make these animals incomparable to the mammals and birds. Some surprising remains showed signs of butchery, making them relevant to diet.

There are 3,465 relevant entries, with 925 identified to taxa and 2,558 unidentified to taxa (Figure 8). Of the remains with identifiable taxa, pig dominates the collection (Figure 7, Figure 8).

Figure 7. Frequency of Identifiable Taxa from PARP:PS

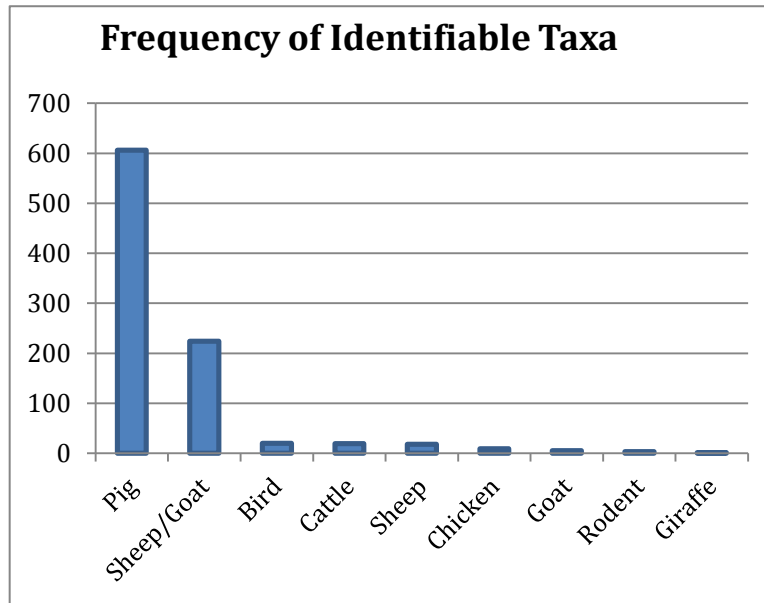
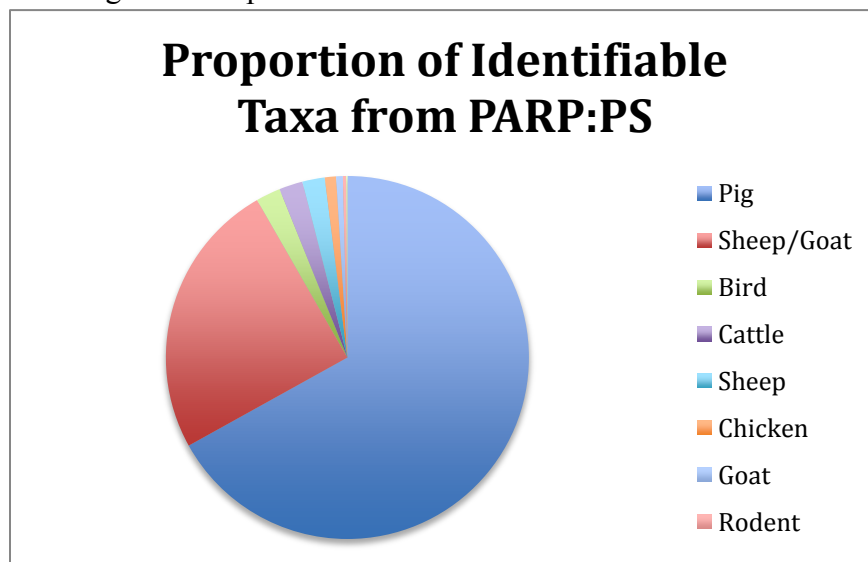


Figure 8. Proportion of Identifiable Taxa from PARP:PS



Domesticates other than pig are also represented strongly in the collection. The distinguishable sheep/goat bones allowed some identification of bones as belonging to one or the other genus, but by combining all sheep, goat, and sheep/goat it is clear that although pig was the most frequently consumed animal, sheep/goat meat constituted a large part of diet as well. It is notable that bird (other than chicken) is much more common than positively identified chicken remains. This may be in part due to identification bias, as the structure of bird bone is distinct from other classes of animal, but certainty in genus is often more difficult. Many bones are placed in the bird category that may be chicken; the bones were only categorized as far as the remains could confidently be identified. This difficulty in identification factors into analysis of desirability of food at PARP:PS, as birds (other than chicken) are considered elite while chicken is less prestigious. The difficulty in distinguishing chicken from other bird inhibits using the frequency of bird bone to determine whether the context includes highly prestigious foods (bird other than chicken) or less prestigious foods (chicken).

The rodent remains in the collection are likely those of dormouse. They differ in size greatly with house mouse, and so these larger bones cannot be misidentified as house mouse. Dormouse can, however, be confused with the black rat. Currently, no black rat has been identified at the site. Although black rats were present in other parts of Pompeii at this time, they likely did not migrate to this area during occupation of this area (Holt, personal communication). The large rodent remains included in the catalogue were likely dormouse, and thus consumed. In addition to the large rodent remains that were part of the diet of the inhabitants of PARP:PS, other small rodent remains were recovered from parts of the site through flotation. This process allows recovery of very small remains by

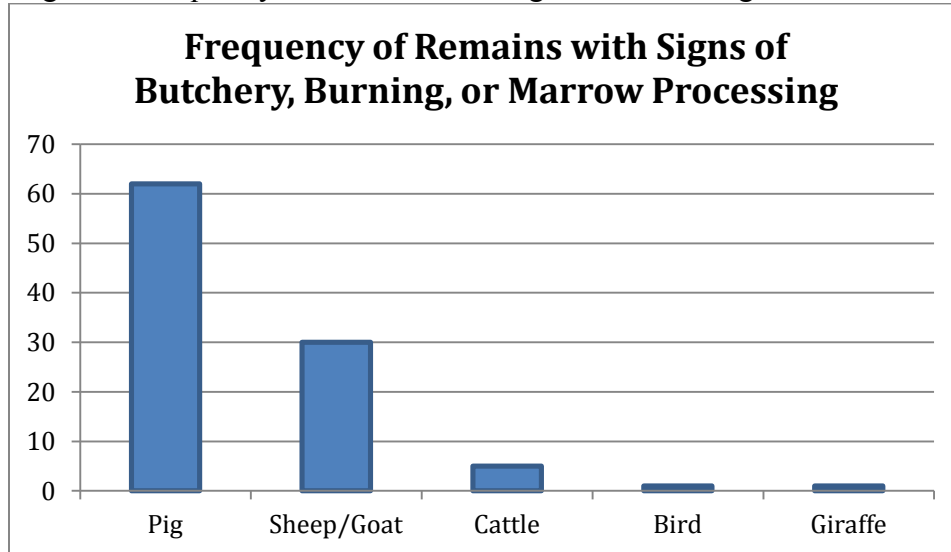
agitating soil with water to separate the soil from other elements, such as bone. The small rodent remains recovered by flotation are those of commensal pests that were not consumed. The small rodent remains are especially important to analyzing this site because they varied among properties within the *insula*. In comparing the remains from drains from two different properties, the drain in one property was found to contain many rodent bones while few were found in the other property's drain. These house mouse bones found in the drain indicate significant food wastage in one property but not the other. The residents of the property with a greater number of house mouse remains would have had access to a greater abundance of food and thus a more elite diet. In addition to this variation, the property with more rodent remains also had more meat, a greater variety of fauna present, and imported food (Ellis 2010:5).

One import found at this property is the unfused proximal epiphysis of a femur (femoral head) of a juvenile giraffe. This part of the femur showed signs of butchery, indicating that the meat was consumed. This exotic animal is unexpected in a non-elite neighborhood as it is a very expensive animal to trade and very few references to giraffes in Roman Italy exist. One possible explanation is that a giraffe died while in transit to Rome, and was butchered in Pompeii because it was along the path of trading from the place of origin of the giraffe to Rome (Holt, personal communication).

The giraffe bone was undoubtedly consumed because of its butchery cut marks. In addition to butchery marks, remains from the site also show signs of consumption with burn marks and evidence of processing for marrow. Burn marks can indicate cooking, and processing for marrow shows the utilization of the fat inside of bones in diet. Bones processed for marrow are distinguishable from butchered bones by the marks they leave

behind; marrow processed bones have a spiral shaped break (Holt, personal communication). Of the PARP:PS catalogue of fauna, 782 specimens show one or more of these features. Of the 99 of these that are identifiable, pig occurs the most frequently (Figure 9).

Figure 9. Frequency of Remains with Signs of Processing from PARP:PS



In addition to which taxa were represented, the skeletal element categories were identified. Analyzing which types of skeletal elements are included in the assemblage is critical to understanding the quality of meat to which the non-elite had access. The skeletal categories include Skull, Vertebra, Rib, Limb, Foot, and Unknown (Figure 10, Figure 11). This comparison is useful in recognizing which parts of the animal were utilized in diet in this *insula*. It also suggests how much the collection of identifiable and unidentifiable remains varied. This highlights the issue of identification biases since some less diagnostic elements were often involved in butchery, burning, or processing for marrow.

Figure 10. Percent of Element Categories of Identifiable Remains with Burning, Butchery, or Marrow Processing from PARP:PS

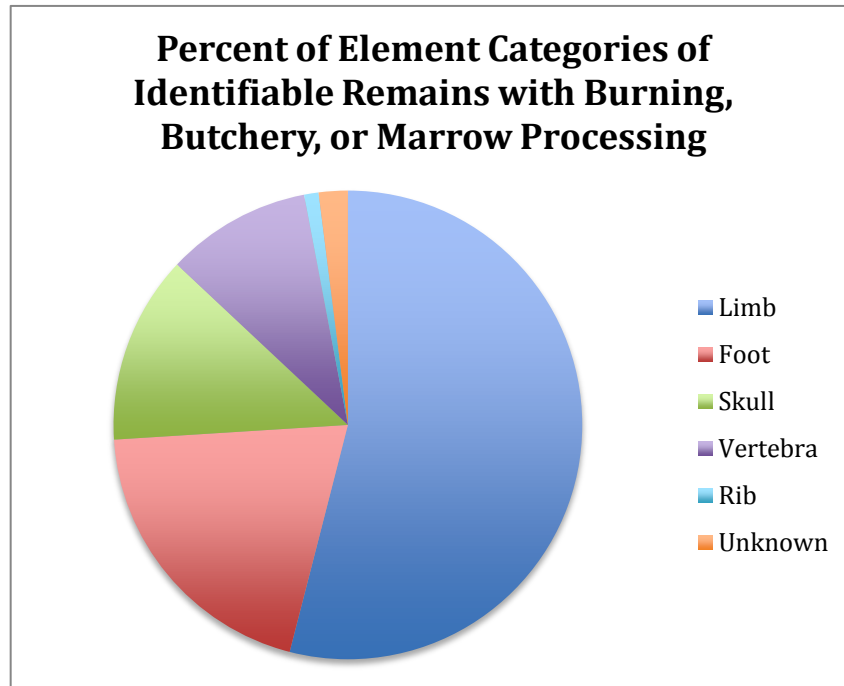
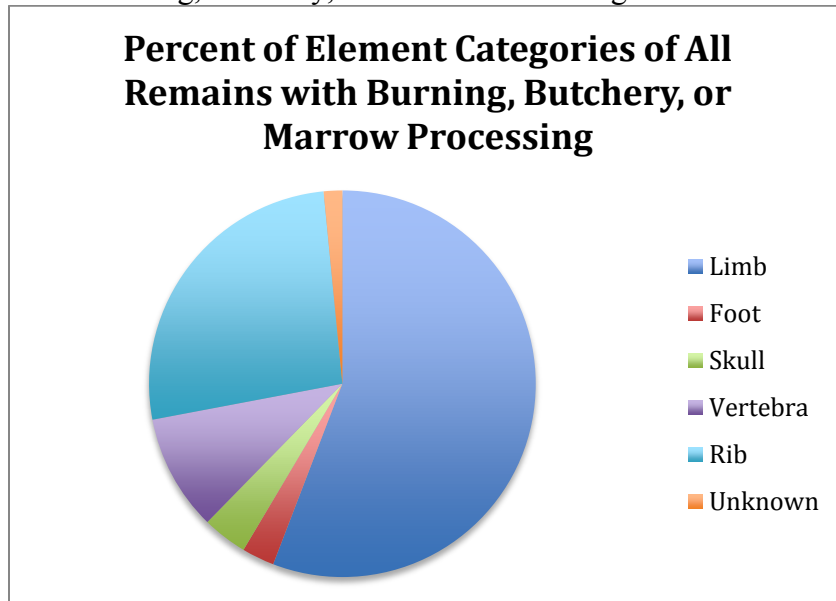


Figure 11. Percent of Element Categories of All Remains with Burning, Butchery, or Marrow Processing from PARP:PS



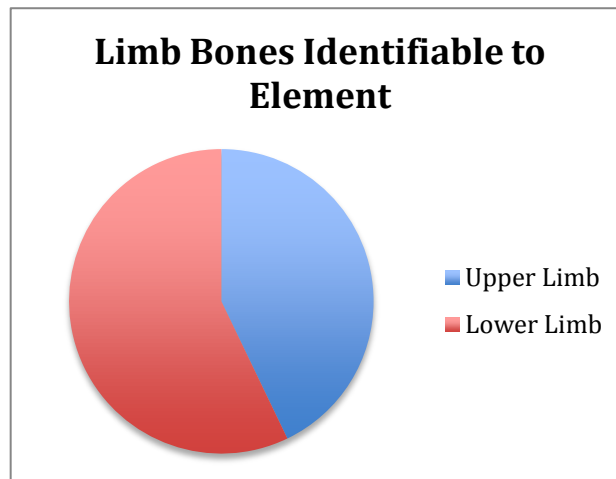
The limb bones were most often butchered, burned, or processed for marrow (Figure 10, Figure 11). Rib is much more apparent in the unidentifiable collection. Rib and

vertebra are often difficult to identify to taxa. Based on the size categories of these bones, it is probable that these bones were from medium-sized domesticates. Of the unidentifiable remains, 88% are categorized as belonging to medium sized animals, and 96% come from medium, small/medium, or medium/large. Only four percent of the remains were conclusively identified as either small or large. The majority of identifiable remains are also from medium-sized domesticates: pig and sheep/goat. The unidentifiable elements, such as rib, likely belong to pig and sheep/goat as well. Evidence of butchery, burning, and marrow processing in the non-elite context PARP:PS usually included limb bones, rib bones, and vertebra from pigs and sheep/goat.

In determining the quality of a cut of meat, it is important to analyze its meat utility index (MUI), a quantification of the caloric value of a cut of meat distinct to taxon and element. MUI is determined using the weight of the skeletal element, with meat, marrow, and grease, minus the dry bone weight (Metcalf Jones: 1988). Another derivation of this, the standardized MUI, (SMUI), designates a value of 100% to the skeletal element with the highest meat utility index and lower SMUI to those with a lower meat utility index. SMUI allows comparison across taxa (Rowley-Conwy et al. 2002: 79). The SMUI aids in determination of the prestige of cuts of meat; elements with higher SMUI are more desirable as they have more meat, marrow, and grease and thus calories. The catalogue of PARP:PS material categorizes SMUI into Low, Moderate, Medium, and High. In the PARP:PS material, limb bones, rib bones, and vertebra from pigs and sheep/goats are the most common elements. There is a large difference in the SMUI of upper limb elements (femur and humerus) and lower limb elements (radius, ulna, and tibia). For pigs and sheep/goat, upper limb elements have a High SMUI while lower limbs have a Low SMUI (Rowley-Conwy

et al.: 2002). Of the processed limb remains identifiable to element, lower limb occurs more frequently (Figure 12). Ribs have a High SMUI. Vertebrae vary between Moderate to High SMUI.

Figure 12. Limb Bones Identifiable to Element from PARP:PS



Markers such as burning on faunal remains reveal how the meat was prepared after butchery. Roasting whole animals is evident in the archaeological record from the location of burning on bones. Specifically, if one or both ends of the bone were burned, these sections were not covered with meat and therefore the whole animal was not roasted. In addition to location of burning and the size of burned pieces revealing how bones were cooked, size of bone can also indicate stewing because the bones were cut into small pieces to fit into a pot. Of the remains with evidence of processing, cut marks were more common, accounting for two-thirds of the processed remains. Only one specimen showed signs of both burning and butchery. Thirty-one of the remains (4.5%) showed signs of burning. Of these 31, 29 of the pieces were fragmentary. If remains were roasted, they were likely not whole animals or large bones but small pieces. In addition to their size contrasting with the expectation of whole animal roasting, the area and intensity of burning is inconsistent with roasting. The bones were not burned at one or both ends but evenly over the bone and the

bones were burned beyond the level seen in roasting. These bones were likely discarded in fire. Some bones showed evidence of removing muscle then chopping the bone into small pieces. The meat is commonly described as chopped in half (47), a very small fragment (27), or chopped at one or both ends (41). It is possible that size of bones changes during consumption if people broke bones apart during meals or to consume the marrow. However, the lack of human gnaw-marks on bones and the marks on the bone indicate that the bones were broken through butchery before consumption.

IV. Results: Comparison of Diet Expected from Ancient Primary Sources to Non-Elite Diet from PARP:PS Archaeological Material

The data shows a heavy reliance on domesticates, with pig being the most abundant, followed by sheep/goat. Pig makes up the largest part of meat consumption, especially since one individual pig provides more meat than one sheep/goat, the next most common taxon (Rowley-Conwy et al. 2002). Over half of the remains with evidence of butchery, burning, and marrow processing were limb bones, followed in number by ribs and then vertebra. The quality of the meat from these element categories, as determined by the SMUI, indicates that the non-elite had access to desirable cuts of meat, but the presence of low quality elements (such as foot) that have evidence of processing reveals more frugality in consumption as less expensive, less desirable elements were also included in diet. Additionally, the higher presence of lower limb bones rather than upper limb elements suggests lower access to meat with high SMUI. Although access to desirable elements was not restricted to the elite, the non-elite also consumed parts of the animal that were not valued by the elite, as determined from the ancient primary sources as well as their SMUI.

The range of element categories with evidence of butchery confirms that the non-elite enjoyed access to desirable cuts of meat, which likely came almost exclusively from pig and sheep/goat. Despite the range in taxa collected from this *insula*, the infrequency with which non-domestic taxa occur indicates that these were uncommon food types in this neighborhood. The inhabitants of this *insula* did not have consistent access to prestigious taxa, like dormouse. Pig and sheep/goat accounted for the vast majority of identifiable remains. Non-domestic animals occur so rarely that these prestige goods were probably consumed on rare occasion when the non-elite emulated elite diet in order to gain

temporary identification with an elite status, possibly for events such as weddings.

Although these non-domestic animals were not a substantial part of the diet, they were still available to the non-elite group.

Fauna from the site also reveals that this *insula*, although closely interconnected, housed people from an assortment of socioeconomic backgrounds. The different levels of rodent remains indicate greater waste and thus greater abundance of food in one property than another. The remains at the property with increased waste, variety, and access to the exotic fauna (in this case giraffe and dormouse), shows greater access to prestige goods than other properties in the *insula*. The faunal remains from PARP:PS illustrate that this society was one in which people of different means interacted on a daily basis, and the fluidity of belonging to elite or non-elite groups as imitation of elite foods was possible.

The remains from PARP:PS align with some expectations from the ancient primary sources but contradict others as well. Just as expected from Apicius' recipes, pig was a substantial part of diet. Other domesticates contributed significantly to diet, but very little wild animal was included. The ancient primary sources, especially literature, placed value on exotic and varied food types. Although not common, the recovery of bird (other than chicken) and giraffe bone reveals that exotic, wild fauna was not restricted to the elite.

Even in a non-elite setting, high quality element categories (limb, ribs, and vertebra) were most commonly processed. Other, low quality categories were also present, showing maximum utilization of meat. Despite the consumption of all areas of the body, these body parts were not consumed whole. In contrast to the consumption of whole animals evident in the visual art of Pompeii and literature sources, butchery evidence signifies stewing or boiling of meat, as opposed to roasting or other preparation methods. Stewing was a more

likely method of preparation since evidence of butchery was much more common than burning. The small size of the bones butchered is consistent with stewing or boiling. The removal of muscle and then chopping bones is indicative of stewing or boiling as well. Preparing meat by stewing or boiling ensures maximum utilization of the meat's calories. Conceivably, the remaining portions of meat that was originally served roasted might have been subsequently chopped into small fragments and stewed to fully capture the nutritional value of the meat. If this was the case, it reinforces the conclusion that the non-elite aimed for complete utilization of the food source. Consuming whole animals was a marker of elite identity that was probably not available in the diet of the people of PARP:PS.

Ancient primary sources from Roman Italy and the faunal remains from a non-elite site reveal different aspects of food culture in Pompeii. Ancient primary sources such as visual art and literature reveal ideals of food. Apicius' cookbook illustrates a utilitarian perspective on gourmet food. The *Edict of Diocletian* portrays the government's perceived values of food. Faunal remains expose the reality of what food was consumed by people, regardless of their social status. The similarities and differences between these sources show the intersection between cultural ideals and practical diet.

A Different Perspective on Roman Italy

This research helps define life in Pompeii from a multitude of perspectives. Food is a central part of culture, and analyzing diet and its implications allow us to better understand daily life in Pompeii for all its residents by looking at an assemblage from one of the non-elite neighborhoods of Pompeii. This research not only augments the information about the city but also more fully analyzes the information from PARP:PS. This analysis of the

remains and the catalogue of remains allow further study of the fauna from this site. On a greater scale, the findings from this research can be applied to other comparable Roman sites. Since fauna is typically not part of the research focus of archaeology in Roman Italy, this research serves as not only a model for non-elite diet in Roman Italy but also as an indicator of the importance of faunal analysis in terms of social standing. This research shows how inhabitants of Pompeii used meat to signal belonging to a group.

With any physical remains from the past, there is no meaning to these materials without an analysis of their greater implications about society. This research emphasizes the importance of faunal analysis in elite and non-elite diet, especially in frequency of taxa, frequency of elements, and butchery methods. These studies delve into the social mechanisms that affect the availability of certain meats and certain methods of processing and preparations, and how fauna indicates social identity.

Further Research

The similarities and differences between the ancient primary sources and the remains at PARP:PS reveal the disconnect between food ideals as portrayed in ancient primary sources and the reality shown in the archaeological record, but also the surprising access to prestigious foods for non-elite residents of Pompeii. Although the ancient primary sources set expectations of lavish feasts featuring wild animals fresh from the hunt, a multitude of fattened birds, and whole roasted animals covered in specific sauces, the faunal remains of elite areas may reveal that these depictions were exaggerations that only further bioarchaeological analysis can contradict. Analysis of other non-elite neighborhoods will also help define diet and identity. If such great variations occur within

one *insula*, the variations among neighborhoods would be interesting to compare. This research is specific to urban non-elite. Comparison between urban and rural non-elite fauna would show differentiation within Roman Italy. The wealth of information from just one site on meat consumption as a form of identity as well as the fluidity of this belonging and the interconnectedness of people from various backgrounds reveals the necessity of including zooarchaeological research in future excavations in Pompeii. Further research of fauna in Roman Italy will help reconstruct not only diet but also grant insight into social structure of Roman Society.

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Appendix 1. Recipes from Apicius' *Roman Cookery Book*

Taxon	Common Name	Elite/ Non-Elite	Wild/ Domestic	Butchery/ Cut	Recipe	Preparation	Notes	Page
Aves	Crane	Elite	Wild		Crane, Duck, Partridge, Turtle-Dove, Wood-Pigeon, Pigeon, and Various Other Birds	Cook, Boil		141
Aves	Crane	Elite	Wild		Crane, Duck, Partridge, Turtle-Dove, Wood-Pigeon, Pigeon, and Various Other Birds	Cook		143
Aves	Crane	Elite	Wild	Whole Bird	Crane, Duck, Partridge, Turtle-Dove, Wood-Pigeon, Pigeon, and Various Other Birds	Boil, Braise		143
Aves	Duck	Elite	Wild		Crane, Duck, Partridge, Turtle-Dove, Wood-Pigeon, Pigeon, and Various Other Birds	Cook, Boil		141
Aves	Duck	Elite	Wild		Crane, Duck, Partridge, Turtle-Dove, Wood-Pigeon, Pigeon, and Various Other Birds	Cook		143
Aves	Duck	Elite	Wild	Whole Bird	Crane, Duck, Partridge, Turtle-Dove, Wood-Pigeon, Pigeon, and Various Other Birds	Boil, Braise		143
Aves	Fig-pecker	Elite	Wild	Whole Bird	Patina à la Apicius	Cook	Extremely complicated recipe with many meats. Calls for "whatever other good things you can think of!"	101
Aves	Fig-pecker	Elite	Wild	Whole Bird	Suckling Pig Fed on Vegetables	Roast, Boil		199
Aves	Flamingo	Elite	Wild	Whole Bird	Flamingo	Cook		149
Aves	Flamingo	Elite	Wild	Whole Bird	Another Method (for Flamingo)	Cook		149
Aves	Goose	Elite	Domestic	Whole Bird	Hot Boiled Goose with Cold Sauce à la Apicius	Boil		149
Aves	Ostrich	Elite	Wild		Sauce for Boiled Ostrich	Boil		141
Aves	Parrot	Elite	Wild	Whole Bird	Flamingo	Cook	Notes at end of recipe that recipe for flamingo can also be used for Parrot	149
Aves	Parrot	Elite	Wild	Whole Bird	Another Method (for Flamingo)	Cook	Notes at end of recipe that recipe for flamingo can also be used for Parrot	149
Aves	Partridge	Elite	Wild	Whole Bird	For Broiled Partridge, Hazel Hen, or Turtle Dove	Boil, Braise		145

Taxon	Common Name	Elite/ Non-Elite	Wild/ Domestic	Butchery/ Cut	Recipe	Preparation	Notes	Page
Aves	Peacock	Elite	Domestic		Rissoles		Most Desirable meat for Rissoles	67
Aves	Pheasant	Elite	Wild		Stuffed Rissoles	Cook (?)		65
Aves	Pheasant	Elite	Wild		Rissoles		2nd Most Desirable meat for Rissoles	67
Aves	Pigeon	Elite	Wild		For Wood-Pigeons and Pigeons	Roast, Boil		145
Aves	Small Birds	Elite	Wild	Whole Bird	Suckling Pig Stuffed in Two Ways		Add "if you have them"	193
Aves	Thrush	Elite	Wild	Whole Bird	Suckling Pig Fed on Vegetables	Roast, Boil	Suggests thrush but for any small bird	199
Aves	Thrush	Elite	Domestic	Whole Bird	Pease Mould	Cook, Boil	Suggests thrush but for any small bird	127
Aves	Thrush	Elite	Domestic	Whole Bird	Pease Turnover	Cook	Suggests thrush but for any small bird	131
Aves	Turtle Dove	Elite	Wild	Breast	Patina à la Apicius	Cook	Extremely complicated recipe with many meats. Calls for "whatever other good things you can think of"	101
Aves	Wood-Pigeon	Elite	Wild		For Wood-Pigeons and Pigeons	Roast, Boil		145
Bos	Cattle	Elite	Domestic	Udder	Stuffed Udder	Cook	Part of Gourmet Section	159
Bos	Cattle	Elite	Domestic	Womb	Wombs from Sterile Sows			157
Bos	Cattle	Elite	Domestic	Womb	Sterile Wombs		Another Recipe	157
Bos	Cattle	Elite	Domestic	Womb	Sterile Wombs		Another Recipe	157
Bos	Cattle	Elite	Domestic	Skin, Fillets, Ribs, Trotters	Skin, Fillets, Ribs, and Trotters			157
Bos	Cattle	Elite	Domestic	Womb	Gilled Womb	Grill		157
Bos	Cattle	Elite	Domestic	Udder	Sow's Udder	Boil, Roast		157
Bos	Cattle	Elite	Domestic		Fried Veal	Fry	Veal (Juvenile)	187
Bos	Cattle	Elite	Domestic		Veal or Beef with Leeks or Quinces or Onions or Taros		Veal (Juvenile)	189
Capra	Goat	Elite	Domestic	Liver	Kid's or Lamb's Liver	Cook	Kid (Juvenile), Part of Gourmet Section	169
Capra	Goat	Elite	Domestic	Sweetbreads	Sala Cattabia à la Apicius		Goat sweetbreads are an ingredient in complicated Sala Cattabia à la Apicius recipe	93
Capra	Goat	Elite	Domestic		Pieces of Kid or Lamb	Cook	Kid (Juvenile)	189
Capra	Goat	Elite	Domestic		Hot Kid or Lamb Stew	Cook	Kid (Juvenile)	189
Capra	Goat	Elite	Domestic		Roast Kid or Lamb	Cook	Kid (Juvenile)	189
Capra	Goat	Elite	Domestic		Roast Kid or Lamb, Another Method	Cook	Kid (Juvenile)	189
Capra	Goat	Elite	Domestic		Another Method for Kid or Lamb, Boned	Cook	Kid (Juvenile)	191
Capra	Goat	Elite	Domestic		Kid or Lamb <Spiced> Raw	Roast	Kid (Juvenile)	191

Taxon	Common Name	Elite/ Non-Elite	Wild/ Domestic	Butchery/ Cut	Recipe	Preparation	Notes	Page
Capra	Goat	Elite	Domestic		Kid or Lamb, Parthian Manner	Cook	Kid (Juvenile)	191
Capra	Goat	Elite	Domestic		Kid with Bay and Milk	Cook	Kid (Juvenile)	193
Cervidae	Deer	Elite	Wild		Venison, Another Method	Boil, Roast		185
Gallus	Chicken	Elite	Domestic		Rissoles		4th Most Desirable meat for Rissoles	67
Gallus	Chicken	Elite	Domestic	Bones	Thick Sauce	Boil	For sauce, boil bones	67
Gallus	Chicken	Unknown	Domestic		Another Broth as Laxative Method	Cook	Broth is better if chicken cooked in it first	75
Gallus	Chicken	Elite	Domestic	Liver	Sala Cattabia	"Previously Cooked"	Chicken liver is ingredient in complicated Sala Cattabia recipe	93
Gallus	Chicken	Elite	Domestic		Sala Cattabia à la Apicius		Chicken meat is ingredient in complicated Sala Cattabia à la Apicius recipe	93
Gallus	Chicken		Domestic		Patina of Wild Herbs, Black Bryony, Mustard Plant, Cucumber, or Cabbage		Add chicken meat if desired	97
Gallus	Chicken	Elite	Domestic	Pieces of Meat, Liver	Patina with Milk	Boil in broth	One of many ingredients in Patina with Milk	99
Gallus	Chicken	Elite	Domestic	Chopped Meat	Patina à la Apicius	Cook	Extremely complicated recipe with many meats. Calls for "whatever other good things you can think of"	101
Gallus	Chicken	Elite	Domestic	Chopped Meat	Everyday Patina	Cook	Second Version of Everyday Patina	101
Gallus	Chicken	Elite	Domestic	Liver	Patella with Cheese and Salt Fish	Cook		103
Gallus	Chicken	Elite	Domestic	Giblets	Patina of Lagita Fish and Brains	Cook		105
Gallus	Chicken	Elite	Domestic	Testicles	Fricassee à la Apicius	Cook		113
Gallus	Chicken	Elite	Domestic	Giblets, Wings	Turnover Stew	Stew, Boil		119
Gallus	Chicken	Elite	Domestic	Wings, Legs	Vegetable Stew	Cook		119
Gallus	Chicken	Elite	Domestic		Pease Mould	Cook, Boil		127
Gallus	Chicken	Elite	Domestic	Giblets	Pease Turnover	Cook		131
Gallus	Chicken	Elite	Domestic	Brains, Chopped Meat	Conchiola, Another Method	Cook	Bone after cooked	135
Gallus	Chicken	Elite	Domestic	Whole Bird	Chicken or Suckling-Pig Stuffed with Conchiola		Bone	137
Gallus	Chicken	Elite	Domestic	Liver	Sauce for Roast Crane or Duck	Cook		143
Gallus	Chicken	Elite	Domestic	Whole Bird	Chicken, Another Method	Boil, Roast		151
Gallus	Chicken	Elite	Domestic	Whole Bird	Chicken in the Parthian Way	Cook		151
Gallus	Chicken	Unknown	Domestic	Whole Bird	Chicken in the Numidian Way	Boil		151
Gallus	Chicken	Elite	Domestic	Whole Bird	Chicken with Asafoetida	Cook		151
Gallus	Chicken	Unknown	Domestic	Whole Bird	Roast Chicken	Roast		153
Gallus	Chicken	Unknown	Domestic	Whole Bird	Boiled Chicken	Boil		153

Taxon	Common Name	Elite/ Non-Elite	Wild/ Domestic	Butchery/ Cut	Recipe	Preparation	Notes	Page
Gallus	Chicken	Unknown	Domestic	Whole Bird	Boiled Chicken with Boiled Taros	Boil		153
Gallus	Chicken	Elite	Domestic	Whole Bird	<Original Name Missing>	Boil		153
Gallus	Chicken	Elite	Domestic	Whole Bird	Chicken à la Varius	Cook, Boil		153
Gallus	Chicken	Elite	Domestic	Whole Bird	Chicken à la Fronto	Cook, Braise		153
Gallus	Chicken	Elite	Domestic	Whole Bird	Chicken with Milk and Pastry Sauce	Braise, Boil		155
Gallus	Chicken	Elite	Domestic	Whole Bird	Stuffed Chicken	Cook		155
Gallus	Chicken	Elite	Domestic	Whole Bird	Chicken with White Sauce	Cook		155
Gallus	Chicken	Elite	Domestic		Suckling Pig Fed on Vegetables	Roast, Boil		199
Rodentia	Dormouse	Elite	Domestic	Whole Dormouse	Stuffed Dormice	Cook		205
Leporidae	Hare or Rabbit	Elite	Wild		Rissoles		3rd Most Desirable meat for Rissoles	67
Leporidae	Hare	Elite	Wild	Liver, Lung	Fricassee with Liver and Lights of Hare			115
Leporidae	Hare	Elite	Wild	Whole Hare	Hare in Sauce	Roast, Cook		201
Leporidae	Hare	Elite	Wild	Whole Hare	The Same in Another Sauce	Boil		201
Leporidae	Hare	Elite	Wild	Whole Hare	Stuffed Hare	Roast, Cook		201
Leporidae	Hare	Elite	Wild	Minced Meat, Liver, Lung, Blood	Hare, Another Method	Roast, Cook		201
Leporidae	Hare	Elite	Wild	Whole Hare	Boiled Hare	Boil		205
Leporidae	Hare	Elite	Wild	Whole Hare	Hare Sprinkled with Dry Pepper	Cook		205
Leporidae	Hare	Elite	Wild	Whole Hare	Hare in Sauce, Another Method			205
Ovis	Sheep	Elite	Domestic	Liver	Kid's or Lamb's Liver	Cook	Lamb (Juvenile)	169
Ovis	Sheep	Elite	Domestic		Pottage with Pastry and Milk		Lamb (Juvenile)	123
Ovis	Sheep	Elite	Domestic		Hot Kid or Lamb Stew	Cook	Lamb (Juvenile)	189
Ovis	Sheep	Elite	Domestic		Roast Kid or Lamb	Cook	Lamb (Juvenile)	189
Ovis	Sheep	Elite	Domestic		Roast Kid or Lamb, Another Method	Cook	Lamb (Juvenile)	189
Ovis	Sheep	Elite	Domestic	Whole Sheep	Boned Suckling Kid or Lamb	Boil	Lamb (Juvenile)	191
Ovis	Sheep	Elite	Domestic		Another Method for Kid or Lamb, Boned	Cook	Lamb (Juvenile)	191
Ovis	Sheep	Elite	Domestic		Kid or Lamb <Spiced> Raw	Roast	Lamb (Juvenile)	191
Ovis	Sheep	Elite	Domestic		Kid or Lamb à la Trapeius	Cook	Lamb (Juvenile)	191
Ovis	Sheep	Elite	Domestic		Kid or Lamb, Parthian Manner	Cook	Lamb (Juvenile)	191
Sus	Pig	Elite	Domestic	Liver, Sausage Skin	Another Recipe for Pig's Liver	Grill	Part of Gourmet Section	159
Sus	Pig	Elite	Domestic	Stomach, Pounded Meat, Brain,	Pig's Stomach	Boil, Smoke	Part of Gourmet Section	165
Sus	Pig	Elite	Domestic	Stomach	Roast Stomach	Roast	Part of Gourmet Section	165
Sus	Pig	Elite	Domestic	Kidneys, Sausage Skin	Grilled or Roasted Kidneys	Brown, Roast	Part of Gourmet Section	167
Sus	Pig	Elite	Domestic	Ham	Ham	Boil	Part of Gourmet Section	167

Taxon	Common Name	Elite/ Non-Elite	Wild/ Domestic	Butchery/ Cut	Recipe	Preparation	Notes	Page
Sus	Pig	Elite	Domestic	Shoulder	Shoulder of Pork	Boil, Brown	Part of Gourmet Section, Bone after boiled	169
Sus	Pig	Elite	Domestic	Liver, Sausage Skin	Sausages	Grill		63
Sus	Pig	Elite	Domestic		Rissoles		Suckling Pig (Juvenile) is 5th Most Desirable meat for Rissoles	67
Sus	Pig	Elite	Domestic	Blood, Ground Meat	Black Pudding	Cook		68
Sus	Pig	Elite	Domestic	Sausage Skin	Variations on Sausage	Smoke	Any Risserole Meat	71
Sus	Pig	Elite	Domestic	Ground Meat, Sausage Skin	Patina with Milk	Cook	One of many ingredients in Patina with Milk	99
Sus	Pig	Elite	Domestic	Chopped Udder	Patina à la Apicius	Cook	Extremely complicated recipe with many meats. Calls for "whatever other good things you can think of"	101
Sus	Pig	Elite	Domestic	Chopped Udder	Everyday Patina	Cook	Second Version of Everyday Patina	101
Sus	Pig	Elite	Domestic	Sweetbreads	Fricassee à la Apicius	Cook	Suckling Pig (Juvenile)	113
Sus	Pig	Elite	Domestic	Shoulder	Fricassee à la Matius	Cook		113
Sus	Pig	Elite	Domestic	Shoulder	Sweet Fricassee of Pumpkin	Cook		115
Sus	Pig	Elite	Domestic	Shoulder	Sweet Fricassee, Another Method	Cook		115
Sus	Pig	Elite	Domestic	Liver	Vegetable Stew	Cook		119
Sus	Pig	Elite	Domestic		Pottage with Sauce for Suckling-Pig	Cook	Suckling Pig (Juvenile)	123
Sus	Pig	Elite	Domestic	Belly, Minced Meat, Brains, Ground Meat, Sausage skin, Shoulder	Pease Mould	Cook, Boil		127
Sus	Pig	Elite	Domestic	Ground Meat, Sausage Skin, Shoulder	Conchiola à la Apicius	Cook		135
Sus	Pig	Elite	Domestic	Brains, Ground Meat, Sausage Skin	Chicken or Suckling-Pig Stuffed with Conchiola	Cook		137
Sus	Pig	Elite	Domestic	Trotters	Sauce for Roast Crane or Duck	Cook		143
Sus	Pig	Elite	Domestic	Whole Pig	Stuffed Chicken	Cook	Suckling Pig (Juvenile)	155
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig Stuffed in Two Ways	Brown, Cook	Suckling Pig (Juvenile)	193
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig, Another Method		Suckling Pig (Juvenile)	193
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig in Liquamen	Brown, Boil, Cook	Suckling Pig (Juvenile)	193
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig Boiled and Stuffed	Brown, Boil, Cook	Suckling Pig (Juvenile)	195
Sus	Pig	Elite	Domestic	Whole Pig	Roast Suckling Pig with a Pastry and Honey Stuffing	Boil, Cook	Suckling Pig (Juvenile)	195
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig fed on Milk, Boiled and Hot, with Cold, Uncooked Dressing à la Apicius	Boil, Cook	Suckling Pig (Juvenile)	195
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig à la Vitellius	Roast	Suckling Pig (Juvenile)	195

Taxon	Common Name	Elite/ Non-Elite	Wild/ Domestic	Butchery/ Cut	Recipe	Preparation	Notes	Page
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig with Bay	Brown, Roast, Cook	Suckling Pig (Juvenile)	197
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig à la Fronto	Brown, Cook	Suckling Pig (Juvenile)	197
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig Cooked in a Metal Casserole	Cook, Boil	Suckling Pig (Juvenile)	197
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig à la Celsinus	Cook	Suckling Pig (Juvenile)	197
Sus	Pig	Elite	Domestic	Whole Pig	Roast Suckling Pig	Roast	Suckling Pig (Juvenile)	199
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig Fed on Vegetables	Roast, Boil	Suckling Pig (Juvenile)	199
Sus	Pig	Elite	Domestic	Entrails, Ground Meat, Sausage Skin	Suckling Pig Fed on Vegetables	Roast, Boil		199
Sus	Pig	Elite	Domestic	Whole Pig	Suckling Pig à la Trajan	Cook, Boil, Smoke	Suckling Pig (Juvenile)	199
Sus	Pig	Elite	Domestic	Omentum	Stuffed Hare	Roast, Cook		201
Sus	Pig	Elite	Domestic		Stuffed Dormice	Cook		205
Sus	Wild Boar	Elite	Wild	Whole Boar	Boar	Cook	Part of Gourmet Section	181
Sus	Wild Boar	Elite	Wild	Whole Boar	Boar, Another Method	Cook	Another Recipe	181
Sus	Wild Boar	Elite	Wild	Leg	Leg of Boar	Boil		183
Unknown	Unspecified Meat	Elite	Unknown	Cut Meat, Skin	Ragout in the Manner of Ostia	Boil	Part of Gourmet Section	159
Unknown	Unspecified Meat	Elite	Unknown		Meat Pieces à la Apicius	Brown, Grill, Cook	Part of Gourmet Section, Bone meat pieces	159
Unknown	Unspecified Meat	Elite	Unknown		Meat Pieces in the Manner of Wild Boar	Boil	Part of Gourmet Section	161
Unknown	Unspecified Meat	Elite	Unknown		Meat Pieces, Another Method	Fry	Part of Gourmet Section	161
Unknown	Unspecified Meat	Elite	Unknown		Meat Pieces, Another Method	Cook	Part of Gourmet Section, Another Recipe	161
Unknown	Unspecified Meat	Elite	Unknown		Meat Pieces, Another Method	Fry	Part of Gourmet Section, Another Recipe	161
Unknown	Unspecified Meat	Elite	Unknown		Meat Roasted	Roast	Part of Gourmet Section	161
Unknown	Unspecified Meat	Elite	Unknown	Neck	Roast Neck	Roast	Part of Gourmet Section	163
Unknown	Unspecified Meat	Elite	Unknown	Lard	Boiled Lard	Boil	Part of Gourmet Section	169
Unknown	Unspecified Meat	Elite	Unknown	Lungs	Lights	Boil	Part of Gourmet Section	171
Unknown	Unspecified Meat	Elite	Unknown	Ground Meat, Sausage Skin	Forcemeat Sausages	Cook		65
Unknown	Unspecified Meat	Elite	Unknown	Ground Meat, Womb	Stuffed Wombs	Cook in water		67-69
Unknown	Unspecified Meat	Elite	Unknown	Ground Meat, Sausage Skin	Lucanian Sausages	Smoke		68

Taxon	Common Name	Elite/ Non-Elite	Wild/ Domestic	Butchery/ Cut	Recipe	Preparation	Notes	Page
Unknown	Unspecified Meat	Elite	Unknown	Minced Meat, Sausage Skin	Variations on Sausage	Boil, Grill		69
Unknown	Unspecified Meat	Elite	Unknown	Suet, Sliced Meat, Sausage Skin	Variations on Sausage	Boil, Grill		69
Unknown	Unspecified Meat	Elite	Unknown	Ground Meat	Patina with Milk	Smoke	One of many ingredients in Patina with Milk	99
Unknown	Unspecified Meat	Elite	Unknown	Ground Meat	Fricassee à la Terentius		Form into meatballs	111
Unknown	Unspecified Meat	Elite	Unknown	Ground Meat	Fricassee à la Apicius	Cook	Form into meatballs	113
Unknown	Unspecified Meat	Elite	Unknown	Ground Meat	Sweet Fricassee of Pumpkin	Cook	Form into meatballs	115
Unknown	Unspecified Meat	Elite	Unknown	Ground Meat	Sweet Fricassee, Another Method	Cook	Form into meatballs	115
Unknown	Unspecified Meat	Elite	Unknown	Ground Meat	Turnover Stew	Stew, Boil	Form into meatballs	119
Unknown	Unspecified Meat	Elite	Unknown	Ground Meat, Sausage Skin	Turnover Stew	Smoke, Boil		119
Unknown	Unspecified Meat	Elite	Unknown	Brain, Minced Meat	Julian Pottage	Cook		123
Unknown	Unspecified Meat	Elite	Unknown	Brain, Minced Meat	Pottage	Cook		125
Unknown	Unspecified Meat	Elite	Unknown	Ground Meat	Peas or Beans, Another Method		Form into meatballs	131
Unknown	Unspecified Meat	Elite	Unknown	Brain, Ground Meat, Sausage Skin, Liver	Pease Turnover	Cook		131
Unknown	Unspecified Meat	Elite	Unknown	Chopped Meat	Stuffed Chicken	Cook		155
Unknown	Unspecified Meat	Unknown	Unknown	Brain	Everyday Patina			95
Unknown	Unspecified Meat	Unknown	Unknown	Brain	Cream of Horse Parsley			95
Unknown	Unspecified Meat	Unknown	Unknown	Brain	Patina of Roses	Cook in shallow pan in ashes		99
Unknown	Unspecified Meat	Elite	Unknown	Brain	Patina with Milk	Boil	One of many ingredients in Patina with Milk	99

Appendix 2. *Edict of Diocletian* Organized by Comparable Weights

Price	Taxa	Common Name	Wild/Domestic/Managed	Type of Food	Amount
By Italian Pound:					
24	Suidae	Domestic Pig	Domestic	Vulva (udder, etc. of sow-pig)	one Italian pound
20	Suidae	Domestic Pig	Domestic	Sumen (udder, etc. of breeding sow)	one Italian pound
20	Suidae	Domestic Pig	Domestic	Bacon Ham of Westphalia or the Cerdagne	one Italian pound
20	Suidae	Domestic Pig	Domestic	Bacon Ham of the Marsi	one Italian pound
16	Suidae	Domestic Pig	Domestic	Ficatum (hog's liver enlarged by fattening)	one Italian pound
16	Suidae	Domestic Pig	Domestic	Lucanicae (seasoned and smoked sausages) of pork	one Italian pound
16	Suidae	Wild Boar	Wild	Flesh	one Italian pound
16	Suidae	Domestic Pig	Domestic	Suckling Pig (Juvenile)	one Italian pound
12	Suidae	Domestic Pig	Domestic	Pork	one Italian pound
12	Cervidae	Deer	Wild	Stag Flesh	one Italian pound
12	Cervidae	Deer	Wild	Flesh of the Buck, Doe, or Roe	one Italian pound
12	Ovis	Sheep	Domestic	Lamb (Juvenile)	one Italian pound
12	Capra	Goat	Domestic	Kid (Juvenile)	one Italian pound
10	Bovidae	Cattle	Domestic	Iscia of Beef	one Italian pound
10	Bovidae	Cattle	Domestic	Lucanicae (seasoned and smoked sausages) of Beef	one Italian pound
8	Bovidae	Cattle	Domestic	Beef	one Italian pound
8	Capra	Goat	Domestic	Goat's Flesh or Mutton	one Italian pound
4	Suidae	Domestic Pig	Domestic	Pig's Feet	one Italian pound

Price	Taxa	Common Name	Wild/Domestic/Managed	Type of Food	Amount
By Ounce					
2	Suidae	Domestic Pig	Domestic	An Iscium (or fresh sausage), made of pork	one ounce
By Whole Animal					
20	Aves	Starlings	Wild	Starlings	10 Whole Animals
250	Aves	Pheasant	Managed	Fatted Cock Pheasant	Whole Animal
200	Aves	Pheasant	Managed	Fatted Hen Pheasant	Whole Animal
200	Aves	Goose	Managed	Fatted Goose	Whole Animal
150	Leporidae	Hare	Wild	Hare	Whole Animal
125	Aves	Pheasant	Wild	Wild Cock Pheasant	Whole Animal
100	Aves	Goose	Wild	Goose Not Fatted	Whole Animal
60	Gallus	Chicken	Domestic	Chicken	Whole Animal
60	Aves	Thrushes	Wild	Thrush	Whole Animal
40	Leporidae	Rabbit	Wild	Rabbit	Whole Animal
30	Aves	Partridge	Wild	Partridge	Whole Animal
24	Aves	Pigeon	Managed	Pigeon	Whole Animal
20	Aves	Wood Pigeon	Wild	Wood Pigeon	Whole Animal
20	Aves	Grouse	Wild	Grouse	Whole Animal
20	Aves	Duck	Managed	Duck	Whole Animal
20	Aves	Quail	Wild	Quail	Whole Animal
16	Aves	Turtle Dove	Wild	Turtle Dove (Two listed, unclear how they differ in original)	Whole Animal
12	Aves	Turtle Dove	Wild	Turtle Dove (Two listed, unclear how they differ in original)	Whole Animal

