Great Blue Herons and River Otters: The Changing Perceptions of All Things Wild in the Seventeenth and Eighteenth-Century Chesapeake

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College of William & Mary - Arts & Sciences

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GREAT BLUE HERONS AND RIVER OTTERS:
THE changing PERCEPTIONS OF ALL THINGS WILD
IN THE SEVENTEENTH AND EIGHTEENTH-CENTURY CHESAPEAKE

A Thesis
Presented to
The Faculty of the Department of Anthropology
The College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree of
Master of Arts

by
Elise Helene Manning-Sterling
1994
APPROVAL SHEET

This thesis is submitted in partial fulfillment of

the requirements for the degree of

Master of Arts

Author

Approved, April, 1994

Marley R. Brown III

Joanne Bowen

Theodore Reinhart
DEDICATION

I would like to dedicate this thesis to my mother, Virginia Manning, who always let me choose what I wanted to be in life, and to my best friend Bruce, who has patiently supported me and kept me sane.
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ABSTRACT

The use of wild fauna was of vital importance for the subsistence of the settlers of seventeenth-century Virginia. The prominent role of wild animals, however, was short-lived, and by the mid-seventeenth century, there was a pronounced preference for domestic resources. This overall change in diet results from conscious and unconscious decisions about food which is influenced by social, economic, and environmental factors. The purpose of this research is to investigate the underlying determinants affecting the decreased use of wild animals, which could offer insight into colonial Chesapeake culture.

An interdisciplinary approach is used which incorporates the strengths of anthropology, history, and zooarchaeology. Anthropological theory provides a foundation on which to examine food as a concept which is endowed with meaning. Historic documents provide information on the economic, social, and environmental spheres of colonial life within a temporal framework. Zooarchaeology yields the remains of colonial meals which supplies evidence concerning the numbers and types of wild and domestic species used at different times and sites.

The correlation of all these data indicate that the use of wild foods was closely aligned with the colonists perceptions of the wilderness. The peoples initial feelings toward the wilderness was one of fear. Slowly, as trees were cut and houses built, and the land civilized, their was an acceptance of the remaining wilderness. Finally, as the land was over-cultivated and stripped of trees in the eighteenth-century, there was a nostalgia for the wilderness that was now lost.

The zooarchaeological evidence mirrors this trend, as there was a noted decrease in the use of wild animals soon after colonization when the wilderness was most feared. As the changing environment gained acceptance, there was an increase in the amount of wild food consumed. By the late eighteenth-century, the use of wild foods was similar to that indicated in the very first years of the colony when wild foods represented survival.
GREAT BLUE HERONS AND RIVER OTTERS:
THE CHANGING PERCEPTIONS OF ALL THINGS WILD
IN THE SEVENTEENTH AND EIGHTEENTH-CENTURY CHESAPEAKE
INTRODUCTION

The acquisition and use of wild fauna played a significant role in the subsistence of early settlers in the Chesapeake region. While wild food resources were used throughout the seventeenth and eighteenth-centuries, their role, and their contribution to the diet, changed through time. Wild foods were used extensively during the early years of colonization, but by the mid-seventeenth-century they were superseded by the use of domestic food resources (Miller 1984).

Using the perspective of zooarchaeology, this research will determine the extent to which wild food sources were used from the seventeenth through the eighteenth-centuries. Patterns revealed by this study will be examined within a cultural framework enforced by anthropological theory. An anthropological perspective can provide insight into underlying or unconscious processes concerned with the people's impressions of wild animals, which then suggests how people perceived themselves within the natural world.

The environment which greeted the colonists—including the wild plants and animals, and the native peoples—were perceived by the English as components of a wilderness. Through language
and actions, the English reacted to their placement in this unexplored wilderness. Their perceptions of one aspect of wilderness can be extended to their perception of wilderness as a whole. In addition, the reactions of the English to their environment indicated their understanding of their role in this untamed natural world.

The use of an interdisciplinary approach, incorporating the strengths of anthropology, history, and archaeology, will offer insight into the various aspects of colonial life. Anthropological theory provides a strong foundation on which to base the concept that food is endowed with meaning, and that by examining a change in diet, conclusions about culture change in the Chesapeake can be made.

Historic documentation provides an immense amount of information on the legal, economic, social, and environmental spheres of colonial life within a temporal framework. Archaeology provides a large data base from a diversity of sites in the Chesapeake which represent occupations throughout the seventeenth and eighteenth-centuries. Faunal data from archaeological sites provides the actual remains of meals, from which meat consumption of different animals can be determined. The use of faunal material can resolve questions pertaining to when, and to what degree, the use of wild food in the diet decreased.

Anthropological theory recognizes several basic maxims, including the concept that food is a "prime constituent of
social relations", and it imparts social meanings (Douglas and Gross 1981:188). Food and diet is a vital aspect of culture which acts as much more than just a agent of survival, and is one of the nonverbal methods through which cultural behavior is expressed. As Mary Douglas noted, "unlike livestock, humans make some choices that are not governed by physiological processes. They choose what to eat, when and how often, in what order, and with whom" (Douglas 1984:3). In the study of subsistence, it is not only necessary to evaluate the availability of specific food resources, but also to focus on "the cultural factors which govern the utilization of potential food resources" (Cleland 1970:8).

Decisions about which food resources are to be used can be a conscious choice based on cultural norms and prejudices. However, much of cultural behavior is deeply imbedded in the unconscious which also affects food choice and consumption. Food is capable of relaying a message from one member of a culture to another, and therefore can be construed as a symbol. Many anthropologists employ symbolic interpretations about cultural food use; Sidney Mintz studied the aspects of food production and consumption to see what food, in its message bearing, symbolic form, means to the consumers (Mintz 1980:70). Food has also been studied at the symbolic level, and found to communicate such concepts as ethnic identity (Kalcik 1984:54).

While cultural meaning can be understood through the use
of a symbolic framework, it must be incorporated into a specific cultural context, as symbolic structures are not timeless (Goody 1979:36). The investigation of culture change necessitates the use of historical sources and methods (Goody 1979:36), and to retrieve meaning from food, it must be viewed within the contexts of space and time (Mintz 1981:71). In this way, anthropologists demonstrate the value of utilizing anthropological theory within an historical and cultural setting.

Historic documentation provides a substantial amount of information which can strengthen the foundation of theory. Some of the historic resources used include seventeenth and eighteenth-century diaries, account books, travelers narratives, and law and statute books, and secondary sources concerned with ecological, economic, culinary and social history. The use of these sources not only place the many aspects of colonial life in an historical perspective, but suggests other avenues of research.

By the eighteenth-century, the environment of the Chesapeake had been transformed. The growth of urban communities, the increase in farmland and local populations indicate the depletion of the forests and wild food resources. This transformed landscape was not brought about solely by the Europeans. William Cronon, in Changes in the Land, an ecological history of New England from European contact through the colonial period, notes, "The Europeans did not
encounter a virgin land—but one which had been utilized and changed by the Indian" (Cronon 1983:10). Thus, in order to understand the changing social and ecological environment, the state of the environment upon European arrival must be analyzed, and the ensuing utilization of the resources by both Indians and Europeans investigated. Cronon states that a goal of this type of study is to "locate a nature which is within rather than without history, for only then can we find human communities which are inside rather than outside nature" (Cronon 1983:14).

The phenomenon of decreased reliance on wild foods is often attributed to the changing economic and environmental landscape wrought by the colonists. Land was cleared for plantations, towns, fields, and pastures, suggesting a loss of wild animal habitat, a diminishing wild animal population, and subsequently a decrease in the use of wild foods. But the decrease in the use of wild foods cannot be solely explained by the depletion of these wild food resources. As Miller points out, "The move to a more focal economy was not propelled by the general depletion of natural resources alone" (Miller 1984:377). He states that this trend was aided by the economic security allowed by the use of domestic animals, and their use as a form of inheritance. In addition, the dominance of domestic animals heralded the reestablishment of British subsistence practices.

Food selection was not only bound by the economy or the
bounty of wild food resources, but was affected by the people's perception of the wilderness and wild things. Even the manner in which food was presented suggests the people's awareness of their place within an environment that was actively being altered from a wilderness condition to a civilized landscape. Wheaton, in an expansive study of French foods from 1300-1789, states that the sight of medieval banquet showpieces featuring "roast swans and peacocks served sewn back into their own skins complete with feathers" would shock the modern diner, who would not be "prepared for so vivid a reminder that our meat is slaughtered" (Wheaton 1983:15). Today there are so many steps between the butchery and the presentation of meat, it is possible to forget one is dining on a slaughtered animal (Wheaton 1983). As the people of the eighteenth-century Tidewater became more closely aware of the natural world, ideas were modified as to what was and was not good to eat (Bowen 1989b). The changing food preferences, as suggested by historical sources, can often be verified by the use archaeological data.

The archaeological faunal material can provide information pertinent to culture change as indicated by altered use of wild foods in the colonial diet. By its nature, archaeological data lends itself to mathematical and statistical manipulation and tests. By specifically investigating the percentage of wild meat contributed to the diet, and studying the number of wild species present, all
within a temporal framework, it can be discerned when, and to what extent there was an increased reliance on domestic animals. Also, by studying the presence and amount of exotic wild species used through time, it can be determined when there was a shift away from using animals popular in medieval cuisine.

The archaeological data base, consisting of forty-five faunal assemblages dating from the early seventeenth-century through the late eighteenth-century, encompasses sites and features representative of varying social strata and wealth (slaves, tenant farmers, craftsmen, and plantation owners), location (rural and urban), and differential use (public and private). Twenty-one of these faunal assemblages were analyzed in Colonization and Subsistence Change on the Seventeenth Century Chesapeake Frontier (Miller 1984), and comprise a major portion of analyzed assemblages from this region. The incorporation of this comprehensive data base will allow patterns to emerge, which indicate broad diachronic cultural trends.

The ability to make strong statements about culture change is facilitated by the incorporation of both historic and archaeological evidence. Each of these avenues of inquiry may suggest specific trends or patterns. To conclude that these trends actually indicate cultural behavior is more credible when it results from a correlation of historic and archaeological findings.
The historical documents incorporated into this investigation of wild food use suggest a general trend of decreasing use of wild and exotic animals through the colonial period. The archaeological faunal data also indicates a severe reduction in the use of wild animals early in the seventeenth-century. However, after this low, the faunal data exhibits an increase in wild food usage which continues into the mid-eighteenth century. This archaeological evidence, while unexpected, does coincide with social trends which were suggested through the investigation of historical documents.

The altered use of wild foods through time was revealed to be closely aligned with the peoples changing perceptions of themselves within the natural world. The perceptions of the wilderness were varied, changing from the fear of the untamed land, to acceptance, and finally to a desire for the lost wilderness. One way in which these changing perceptions were manifested was in the altered use of wild food in the diet. Collectively, the historical and archaeological data are able to provide an insight into the more subtle social forces operating in colonial Chesapeake culture.
CHAPTER I

SEVENTEENTH-CENTURY CHESAPEAKE

The Tidewater was a region that experienced great change during the seventeenth-century; from the first colonists who struggled to establish a tenuous settlement in Jamestown, to the well situated people of the late seventeenth-century who owned land and buildings, domestic animals, and tobacco crops. The first settlers encountered a land which in many ways reminded them of their homeland, but which presented many obstacles which had to be overcome before a colony could be established. It was a time of trial and experimentation, as the settlers attempted to force the land to yield to their concept of civilization.

The wilderness, and the incredible abundance of animals and natural resources was the most conspicuous aspect of the new world. The Chesapeake is especially rich in animal resources, as its temperate climate allows both northern and southern species to prosper (Pryor 1979). The Tidewater area is also part of the Atlantic Flyway, where, every spring and fall, large numbers of birds pass over, with many wintering in the mild waters of the Chesapeake (Stewart 1962 in Miller 1986, Lippsone 1979 in Miller 1986). Today there are over 380
species of bird present in the Chesapeake, probably with even more present in the seventeenth-century (Gusey 1976 in Miller 1986:124). The Tidewater, as implied in its name, is where freshwater from inland rivers merge with the sea, creating a prime habitat for various aquatic species. In addition to the presence of marine, estuarine, and freshwater fish species, are anadromous and semianadromous species which live in the Atlantic, but return to fresh water to spawn (Lippson 1979 in Miller 1984). The uniqueness of area also allows for resources and game to be better exploited, as the rivers run slower than in other regions, allowing for navigation farther inland (Bakeless 1950).

The natural abundance of the region was usually emphasized by early explorers, as England's wild game and wood supplies were almost depleted. What was left of England's natural resources was usually reserved for royalty and people of high status. Early authors related descriptions in which they proclaimed their honesty, as if the abundance of natural resources was too much to be believed (Cronon 1983). One narrator wrote of the wonders in the new land, "...elks are as great as oxen...raccoons, as good meat as lamb,... sheepsheads, this fish makes broth so like mutton,...sturgeons, of ten foot long..." (Maxwell 1848, vol. 2:76-77). Throughout the seventeenth-century, oysters were so prevalent, that banks of the "rose well above the high tide mark, forming navigational hazards in both the James and York
Rivers" (Noel-Hume 1978:30). The early explorers met a land which abounded in game on the land, in the water and air, and which provided many other resources which could be used for subsistence and for profit.

A major portion of documentation concerning the seventeenth-century environment comes from explorers' descriptions. As Cronon (1983) points out, the biases in historic documents must be identified, including the purpose of the author for writing, generalizations made from a local to a broader (regional) description, and the varying nomenclature and misidentification. While these biases are inherent in the narratives and diaries, Cronon also views them as fairly accurate.

The historic descriptions may well be accurate, but should not be considered completely factual, as nomenclature, and expertise in identifying different species, varied greatly among these narrators. Wharton states that, "often the same fish name has applied throughout history to different fish at different times or in different areas. Contrariwise, different names, in regional usage, may apply to the same fish" (Wharton 1957:8). Thus, it is hard to make exact comparisons between species present in the past to extant wildlife. There are also numerous accounts of contemporaneous writers correcting others' usage, as in this 1670 account, "luxurious herbage invites numerous herds of red deer, improperly called elks by ignorant people" (Tyler 1966, Series
There may also be differences in descriptions based on the author's motives. The promoters of the New World emphasized the wealth of plant and animal life and "completely ignored the 'wilderness' aspect, as inconsistent with the idea of beneficent nature" (Nash 1978:25). Explorers also perceived the land differently - viewing and describing resources as salable commodities, while colonists viewed the environment for potential settlement, and had a better sense of ecological relationships (Cronon 1983).

The promoters of the colony portrayed the new land in an overly favorable light, in order to lure the people who would lay the groundwork for future settlements. The descriptions of the wildlife, and the Indians seemingly effortless abundance of food, led many colonists to expect wealth without labor (Cronon 1983). This was due mainly because the explorers' treks and accounts were conducted in the bountiful spring and summertime (Cronon 1983). Consequently, not only were the colonists surprised at the amount of work that had to be invested for survival, they were unprepared for the severe and dismal winters.

Despite the abundance of wild game in the New World, the settlers were not yet equipped to support themselves. In a letter from 1623, Thomas Nicolls of Wolstenholme asks the Company in England for bread and cheese, as there would be more comfort in them than "by all the deer, fish and fowl
[that] is so talked of in England, of which, I can assure you, your poor servants have not had so much as the scent since their coming into the country" (Wharton 1957:27). John Smith, in the early 1600s, lamented, "Though there be fish in the sea, fowls in the air, and beasts in the woods, their bounds are so large, they so wild, and we so weak and ignorant, we cannot much trouble them" (Wharton 1957:6). The sentiment of not being able to take full advantage of this bounty was often echoed in the early journals.

There were several reasons why there was starving in a land of plenty; settlers were not chosen to come to the new land based on any special skills, and few had expertise in hunting or fishing. These were considered leisure activities in England, which were reserved for the aristocracy; few of whom were present in Virginia during the early years. The firearms in use in the early seventeenth-century were cumbersome, difficult to use, not very accurate, which further decreased the potential for attaining wild game. The promoters of the colony concentrated on getting the people across the Atlantic, giving little thought to how they would sustain themselves once they got there. So, the people were ill-prepared for survival; equipped with few guns, and little fishing gear. Miller's investigation of seventeenth-century inventories revealed a paucity of fishing equipment; usually only hooks and lines and gigs and lines are listed. There are also few examples of boats or canoes, which suggests that the
fishing was done from the shoreline (Miller 1986).

Wharton (1957) outlines several reasons why full advantage was not taken of the large fish population, even though the acquisition of fish was considered an important activity by the developers of the colony. The presence of fish in the Chesapeake is somewhat irregular; sometimes there are prodigious amounts, while other times there is a paucity of fish species. Fish are most prolific in the heat of the summer, when they are most apt to spoil. While the absence of ice and the scarcity of salt made preservation difficult, the possibility of sun-drying fish was negated by the ever-present humidity. Sir Thomas Gates, writing in 1610 offers laziness as a reason for lack of food. He describes men so lazy that they ate raw fish rather than get wood to cook it, while their nets rotted due to lack of repair (Wharton 1957).

As the settlers attempted to adapt their lifestyle to the new land, many of their number were dying off from disease and hunger. As their numbers decreased, and they became weaker, it became harder to search for, and gather basic foodstuffs. The survival of the English at the early settlements is often attributed to the intervention of the Indians, who arrived laden with food when the settlers were on the brink of starvation. One account attributes their salvation to God, who sent "our mortal enemies [Indians] to relieve us with victuals, as bread, corn, fish, and flesh in great plenty, which was the setting up of our feeble men, otherwise we had
all perished" (Wharton 1957:6). Not only did the Indians bring food, but explained how to plant grains, hunt fish with spears, and how to erect fishing weirs. Ironically, the English stronghold on the land came about through the Indians, whose "tutelage in the natural life of the woods and fields often provided the English with the slim difference between survival and starvation" (Axtell 1972:338).

The English accepted food and knowledge from the Indians to relieve their hunger, and sanctioned the use of Indians as hunters for the betterment of the community. In 1619 the Assembly permitted six Indians to live within the settlement, if they engaged in fishing for the whites (Wharton 1957:23). Local disputes between the Indians and whites, and the Powhatan Uprising of 1622 brought renewed instability for English subsistence. Once again, the settlers were starving, but this time because of fear of ambush when going out beyond the settlement gates to hunt. A Proclamation by the Governor and Council of Virginia 1623 which set prices for Canadian fish to prevent profiteering, illustrates how miserable and impoverished the colonists were. For the further relief of the struggling colonists, this proclamation was renewed in 1625-26 (Wharton 1957:27). Throughout the seventeenth-century, many hunting and fishing acts and laws were instituted. Hunting and fishing were activities not only important for survival in the new land, but which had long histories of social significance in England.
The English brought with them ideas about wild and domestic animals, and social precepts of hunting. Hunting in England was strictly controlled, and was considered a "Game and Recreation commendable not only for Kings, Princes, and the Nobility, but likewise for private Gentlemen" (Cox 1697:1, emphasis original). In 1670 England, one had to be at least a Gentleman, or make over 100 pounds a year to hunt (Bowen 1975). There were few large wild animals left in England in the 17th century, and the majority of those were enclosed in deer parks, restricted to the use by nobility and the well-to-do. Yeoman did poach, but this was not only considered socially reprehensible by the aristocracy (Bowen 1975a), but was legally punishable under forest laws. The lower classes, not surprisingly, were opposed to these laws, as they wanted the same access to wild game with which to augment their diet (Thomas 1983). At the same time there was the converse principle concerning ownership of animals; domestic animals could be owned, but wild animals could not be owned until killed or tamed. Within this system, there was a distinction of animals which could be hunted by the upper class, such as deer, and those which could be hunted by anyone, such as foxes and wolves (Thomas 1983). This highly structured history of hunting laws and restrictions precipitated the arrival to the New World of an unprepared group of yeoman.

The restrictions concerning hunting changed dramatically in the wilderness of Virginia. A 1632 law dictated that while
no one could kill a pig without a license, anyone could kill deer, wild beasts or fowl in the common woods or the forest (Henings 1823, vol.1). Thus, anyone was allowed to hunt on common land, while land patents usually reserved fishing, hunting, and fowling rights to the owner. A land patent granted to Henry Earle of Arlington included, "...bays, creeks..., with all sorts of fish... as well as whales, sturgeons, and all other royal ffishes... and all sorts of deere, wild beasts and ffowl..." (Henings 1823, vol.3:570, emphasis original). The act of owning land now offered a greater access to wild resources. Trespass onto another persons land could be quite costly; a 1642 statute requires payment of 400 lbs. of tobacco for every offence (Henings 1823, vol.1:249).

Before the 1622 massacre, colonists relied heavily on trade with the Indians in acquiring wild game, especially deer. There is documentation of professional hunters, but it is not clear what role they played during the early years of settlement; how often they were used, or how much food they contributed. Obviously, a hired hunter would have greater expertise, be more expedient, and allow his employer more time for planting. A wealthy planter in the 1640's was able to hire a hunter for the cost of powder, shot, food, drink, and lodging (Miller 1986). From historic documentation in the Maryland colony, Miller (1986) states that a professional hunter was employed at St. John's, and possibly one worked for
Governor Calvert. Many wealthy households apparently hired Indians, and supplied them with hunting implements. However, this practice was banned as people became increasingly nervous about attacks from Indians (Miller 1986). A 1661 act required that any Englishman that wanted to employ Indians for hunting had to first receive the permission of the Governor of the colony (Palmer 1875, vol.1).

Wolves were considered a threat to English survival, as they cut into the domestic and wild food supply. Hunting of wolves was encouraged at all times, and could be caught by various methods including pit, gun, or dogs. Hunting for either wolves or game in the forests was promoted in a Statute of 1632, so that the settlers would have training in the use of firearms, and keep the Indians at a distance (Henings 1823, vol.1:199). A large amount of energy was exerted to eradicate wolves; bounties were offered for their heads, they were tracked by hired hunters, and hunted by groups of men who destroyed swamps and other wolf habitats (Cronon 1983). The use of bounties resulted in abuse of the system, where the same wolf would be turned in several times, and she-wolves would be spared. Nonetheless, wolves were systematically hunted so that they were no longer a menace in the Tidewater area by the early eighteenth-century.

The removal of the wolf as a threat was one way of taming the wilderness. Another prerequisite to civilization was the improvement of the land, which included the clearing of trees
and the erection of fences. The fence can be construed as a symbol, both of civilization, and of owned land (Silver 1990). The rail fence, an innovation that was less labor intensive than other fence types, as it precluded the use of palisades or palings, was predominantly used (Otto 1989). Many statutes concerning fences were imposed in the mid-1600s; mandating the height of fences, and even requiring a fence reviewer. If there was a dispute concerning crop damage and cattle, the owner of the destroyed crops was considered at fault, as a proper fence would have prevented the damage. To prevent the damage to their crops by English cattle, Indians adopted the fence system (Cronon 1983).

The English, upon arrival, codified many aspects of daily life as part of a new system of law. The investigation into these laws can illustrate aspects of the social milieu at the time they were adopted. The hunting laws of the seventeenth-century indicate a preoccupation with the Englishmen's only neighbor, the Indian. After the 1622 unrest, "severe censure of punishment by the Governor and Council" (Wharton 1957:28) was threatened if anyone went out hunting without a sufficient number of well armed men. In 1646, the lands between the James and York Rivers were ceded to the English. After that time, any Indian found on these lands was sentenced to death. In some fairness, an English law mandated a felony charge to any white found on the Indian's hunting ground (Henings 1823, vol.1:324). Indians had hunting grounds assigned them in
1653, and four years later were granted the right to hunt in the woods, outside the fenced plantations of the English (Henings 1823, vol.1:382,458).

Throughout this period, the Indian was pushed further away from prime hunting and planting areas, as the English took these areas for their houses and plantations. The English also had assumed that if they kept the Indian away from fish and shellfish especially oysters, they would be weakened and subdued (Wharton 1957:30). The English succeeded so well in this mission, that Statutes were enacted in 1662 "for the better relief of the poor Indian" (Wharton 1957:30), to be allowed to fish and oyster, and in 1676, to be allowed to hunt and fish, on their own land, with bows and arrows only (Henings 1823, vol.2:350).

These occurrences were the result of the interaction of two very distinct cultures. The New World was already populated by people who possessed well defined ideas about property and natural resources (Silver 1990). Then the English arrived replete with "a blueprint - in their minds - for re-creating the culture they had left behind" (Deetz 1977:6). In the early years of settlement the two cultures traded food, domestic goods, and ideas, and learned from each other in the "shifting frontier between wilderness and civilization" (Axtell 1972:336). Eventually, their disparate world views caused misunderstandings which ended in distrust, and ultimately, English domination.
Many of the clashes of English and Indian cultures were a result of misconceptions concerning private ownership. As Gary Nash (1972) explains, from 1607 on the main reason English came to the new land was to build an enduring society. This required acquisition of land which was in the possession of the Indian. The English believed the Indians held no concept of private property. As Christopher Newport stated in 1607, "...the inhabitants having no concern with any nation, no respect of profit..." (Wharton 1957:8). The Indians' world view, however, acknowledged both individual and group ownership. Individual ownership was the way in which inhabitants of a village perceive property within the community, and collective sovereignty was the way in which the people of a village perceive territory in relation to other sovereign groups (Cronon 1983). The Indian system of private property differed from the English system, as there was an emphasis on reciprocity rather than profit. The stockpiling of goods was ineffectual; these items would decrease the amount of mobility enjoyed by the Indians.

In land dealings between Indians and whites, each was working under the ideas and rules of their own system. The English believed they were buying unique rights to land, while the Indian thought he was trading the rights to use the land (Cronon 1983). Once land was acquired from the Indians for the Virginia Company, and later, for the English crown, some was kept in reserve, while the remainder was given out to
individual settlers in grants. The practice of endowing fifty acres to each settler, and fifty more acres for each laborer, servant, and later, slaves, was in effect in 1635 (Otto 1989:17). Once land exchanges were made between whites and Indians, they were considered binding under English law.

Perceptions of animals and commodities in terms of subsistence, status, and profit, also differed greatly. The Indians' necessities were limited, as they used only what they needed for physical, spiritual, and economic subsistence. There were few resources which supplied economic status (Cronon 1983). This changed drastically throughout the seventeenth-century, as the Indians began to adopt English ideas of profit. Conversely, the needs of the English were great, as they used resources not only for their physical subsistence, but also could endlessly utilize and profit from resources as commodities.

There was a marked contrast between the utilization of animals by the English and the Indians. While the husbandry practices in Virginia differed greatly from those in England, much effort was made for the betterment of the stock. The settlers brought their domestic animals, swine and cows, with them, but found that it was easier to let the animals run free rather than adhere to the English husbandry system. By allowing these animals to roam free in the woods, the colonists were alleviated the tasks of regular maintenance, such as fencing and feeding the animals. The colonists were
practicing what Miller calls a "husbandry of neglect" (Miller 1984:231), which allowed more time for tobacco production. The animals survived well under this new system, roaming free throughout the expansive lands, where they could always be hunted, corralled, or killed as needed. Sheep did not fit well into this husbandry scheme, as they needed more care and protection from predators. Only in the 1690s was it viable to raise sheep, because of the decline in the wolf population (Walsh 1988).

The keeping of domestic animals is responsible, in part, for the construction of fences and roads, cleared fields of grass and clover, and the hunting of predators such as wolves (Cronon 1983). Domestic animals were owned by individuals, and the community. Miller (1984) notes that domestic animals provided economic security, as well as representing a viable food source.

The Indians viewed the wild animals as providing meat and raw materials, such as skins, sinew, and bone tools. Unlike the English notion of specific ownership, the Indians believed they could utilize any animals on their lands. The differing ideology is illustrated in a discussion between an Indian king who was blamed for killing English cattle which had trampled Indian cornfields. The king countered that the English had killed his deer, to which the English stated that they did not know which was his deer, as they were not marked. The king replied "none of my deer are marked,... and when you meet with
any that are marked you may do with them what you please; for they are none of mine" (Gray 1941:138). The Indians' utilization of the land and its resources was a cause for both praise and condemnation from the settlers.

Many early writers praised the fishing and hunting abilities of the natives. Indians were also lauded for their music, customs, strength, agility, entertainment, and hospitality. But, many of the occupations and traits of the Indians were considered unsatisfactory to the English. The English perceived a people who did not improve the land (except in case of agricultural fields and cleared areas), and did not amass wealth. They saw the women working the agricultural land, while the men did nothing but hunt and fish, considered leisure activities to the English (Cronon 1983; Hudson 1976). The English misunderstood what they saw—they did not comprehend the division of labor among the Indians, where the men cleared land, hunted, and waged warfare, all which required much energy and strength. The majority of these activities were not witnessed by the settlers, as they were primarily conducted in the colder months when the settlers stayed indoors (Hudson 1976:259). However, as perceived by the English, these qualities were enough to justify the belief the Indians were not utilizing the resources to their fullest, and therefore were not entitled to the land.

In addition to these apparent faults, the Indians were
dehumanized in various ways by a number of authors. The dehumanization of the Indian was conducted by two similar methods: they were considered wild animals, savages who did not rate the rights of men, and they were portrayed as a godless, unchristian people.

The descriptions of a godless people ranged greatly from the portrayal of Indians as guileless children, to being outright disciples of the devil. Thomas Hariot wrote "it is a pleasant sight to see the people... free from all care of heaping up riches for their posterity, content with their state...which God of His bounty hath given unto them, yet without giving Him any thanks according to His deserts" (Wharton 1957:23). Others, such as G. Peckham, viewed the Indians as godless, but within the reach of salvation by the Europeans, who could bring them from "falsehood to truth,.. from superstitious idolatry, to sincere christianity, from the devill to Christ" (Quinn 1940 in Nash 1972:204). Perhaps the most scathing ideas on the Indians came from Cotton Mather, the famous New England zealot who believed and preached that the "devil had personally conducted the Indians to America to keep them 'out of the sound of the silver trumpets of the gospell' and thus prevent their salvation" (Bakeless 1950). The Indians were portrayed as the most terrifying beings in the New World because of their lack of religion. Robert Gray, an Englishman arriving in Virginia in 1609 said, "Although the Lord hath given the earth to children of men,... the greater
part of it [is] possessed and wrongfully usurped by wild beasts, and unreasonable creatures, or by brutish savages, which by reason of their godless ignorance, and blasphemous Idolatrie, are worse than those beasts which are of most wild and savage nature" (Gray 1609 in Nash 1972:210).

Many writers were vehement in their castigation of the Indian, so as to seem more Christianly themselves. Many settlers and promoters of the colonies, were in terror that their association with the Indians would somehow bring them down to a level of savagery. A Call for Cohabitation in 1705, a paper outlining the positive attributes of living in towns, was initiated partially out of the fear of reverting to primitive, wild ways (Virginia Historical Society 1894, Vol.4:256-265). The Indian, to the English mind, embodied the most frightful visage one could imagine; a savage beast who had no fear of god or his vengeance. Nash (1978) suggests that the English view of the Indian as a fierce animal was a means of predicting and preparing for the future, and of justifying imminent actions.

While a majority of English seemed to be against the Indians, there were those who spoke out in their defense, questioning the Englishmans right to take the land of others (Nash 1978). In 1609 Robert Gray asked, "By what right or warrant we can enter into the land of these Savages, take away their rightfull inheritance from them, and plant ourselves in their places, being unwronged or unprovoked by them" (Cravent
1944 in Nash 1978:209). Even this one argument in the Indians' defense was invalidated with the Powhatan Uprising of 1622. This confrontation caused to confirm the notion of the wild, untrustworthy savage. The Indians could no longer be trusted, and were to be blamed for many of the ills of the colony, even though several English leaders admitted that the uprising probably resulted from their own unfair treatment of the Indians (Nash 1972). In 1629, there was potential for some of the bad feelings from the uprising to be put aside. A peace treaty was arranged, but then rejected by the Virginia Council, on the grounds that a "policy of 'perpetual enmity' would serve the colony better" (Nash 1978:219). An attack by the Algonkians was attempted in 1644, which failed because of English retaliation. In 1646 these Indians asked for peace, and were then considered English allies (Nash 1978).

The Chesapeake Indian population at the time of the Jamestown settlement was approximately 16,000, which was already vastly depleted due to diseases from earlier contact (Silver 1990:81). At the time of the Powhatan Uprising, there were only 900 settlers, which grew to 25,000 by 1660, and to 60,000 in 1689 (Fausz 1988:87). As the English population grew, Indian numbers declined due to disease, their participation in small economic wars, and their displacement from prime game and fishing areas (Fausz 1988). The large scale deaths of the Indians suggested to some of the English religious types that God was making room for them. The
demoralized Indians of the 1670s could exert no power, and their contributions to the early settlement could be forgotten (Fausz 1988). The lifestyle of the Indians of the late seventeenth-century was drastically changed from that which they enjoyed less than a century ago.

The Indians use of the land before the arrival of the Europeans consisted primarily of hunting for small and large game, fishing, and cultivation of crops, supplemented by gathering of wild plants. The southeastern Indians were relatively sedentary, only moving their villages when the surrounding land had been depleted of firewood, and the fields' soils were exhausted (Hudson 1976:276).

The primary crop of corn was planted on mounds placed several feet apart and beans, squash, pumpkins, and tobacco were planted amongst the corn. To make the best use of cleared agricultural land, a method of multiple crops was also employed. Crops which could be sown at the very beginning of spring, such as early corn, were planted, harvested as quickly as possible, and then another crop planted in the same field (Hudson 1976:297). This method, known as intercropping, not only replenished the nutrients, but prohibited weeds, and retained the soil moisture, resulting in higher yields (Cronon 1983).

Two distinct types of Indian agricultural fields were utilized. Garden plots were cleared and tended by the women, placed adjacent to the living area, and used to grow early
corn. The larger fields, located by the rivers, were cleared by the men, tended by both men and women, and produced late corn and the other major crops (Hudson 1976:295).

The indigenous Virginia landscape was composed of forest, which had to be cleared for crops and villages. Indians used fire to burn the bark off the trees, which would then eventually die. Setting fire to the forest underbrush had several advantages; not only would this allow increased movement through the forest, but would also augment vision of game and enemies, across the forest floor. This type of burning apparently did little damage to the forest, as the fires, which burned low and hot, did not affect the thick tree bark, and eventually extinguished themselves.

An aboriginal method of hunting with fire was practiced which entailed hundreds of men going into the forest, and making a circle which could be as large as five miles in circumference (Hudson 1976:276). The fall ground cover would be set on fire, and the hunters would close the circle as the fire spread inward, trapping the wildlife.

Cronon (1983) outlines several favorable aspects of burning trees and brush, including increase in forest nutrients, the thinning of the forest canopy which allowed more light, and the destruction of plant diseases and pests. The open land also offered conditions beneficial to berries and other food which could be gathered, and increased the population of fauna which are drawn to edge areas, such as
deer, elk, rabbit, turkey, and quail.

The many methods Indians used to acquire game had one common theme; only that which could be used was hunted. In addition to the meat, a large portion of other animal parts could be used for tools and as raw materials. Deer meat comprised a large part of the diet, but there seems to have been minimal effect on the deer population, as evidenced by the large amount of deer recorded in the early seventeenth-century (Silver 1990). However, Silver (1990) notes that early explorers observed more deer inland, further from Indian villages. The Indians of Virginia usually hunted relatively close to their villages, utilizing the many peninsulas as natural corrals, possibly depleting the local population. However, a hunting range could extend as far as 300 miles from home (Hudson 1976:272). The Indians also took advantage of the vast abundance of fish, using elaborate weirs, nets, bows and arrows, and pointed sticks. They even used nooses to catch the large sturgeon.

The conservation methods of the Indians, as with many of their social and economic traditions, began to break down in the seventeenth-century. When there was no profit motive, there was no need to over-hunt. However, the English provided a market which supplied Indians with trade items to which they attached some importance, including wampum, guns, pots and pans, sewing equipment, beads, and eventually, whiskey and rum. These were traded for both the meat and skins of deer
and beaver for which there was great demand in England as well as the colonies. By supplying the whites with great amounts of deer and beaver, the Indians depleted a large part of the animal population. This situation, coupled with the loss of their lands, left the Indians little on which to subsist (Cronon 1983), and made them more susceptible to cultural extinction, and reliance on non-traditional practices.

The English who came to Virginia devised a settlement pattern much different than that in New England. The Virginians, like the Indians they were displacing, settled along the waterways, as the water channels provided an easier and more efficient mode of travel and trade. The English also had to adapt their customary agricultural methods from the use of a plow hitched to horses and oxen to prepare diverse fields, to a swidden type agriculture where the majority of the labor was supplied by human labor and the hoe (Miller 1986).

The colonists utilized some of the abandoned Indian planting grounds, but predominantly had to clear new land for their crops and homes. Two methods were used primarily for forest clearing; girdling of trees, and cutting down and burning of trees. The former was not labor intensive, but took several years for the tree to die and start to decompose. The latter took much time and effort, while the ash product would supply nutrients which were quickly distributed throughout the soil after a rainfall (Cronon 1990).
The colonists adopted the Indian way of planting corn and tobacco in mounds, which apparently did not adversely affect the soil. Miller (1984) submits that after four or five years of tobacco, and two or three of corn production, fields would be abandoned, and would have nutrients replenished after twenty years of lying fallow. In addition, planters kept reserves of woodland available for when land already under tobacco cultivation became exhausted (Bowen 1991). Unfortunately, as tobacco became an increasingly profitable product, and land was harder to obtain, these optimal conditions were not met, and the fields were extremely overused.

In an effort to make the colonists more self-sufficient, the Virginia Company of London, and later, the Virginia governor, required that settlers plant two acres of corn for each acre of tobacco (Otto 1989:11). Whether these orders were followed is uncertain, as tobacco was in much greater demand, as it represented money, and thus, necessities and goods. The importance of tobacco is emphasized by Lorena Walsh (1988), who has extensively researched the social and economic environment of colonial Virginia. She suggests that only enough land was cleared so that corn could be planted around the stumps of trees. In this manner, some vital food crops could be planted with minimal effort, leaving more time and energy to focus on tobacco farming. Walsh states that settlers were "skimming the resources of rich, virgin tracts"
(Walsh 1988, Chapter 2:4) by planting grains, legumes, and vegetables which would produce with little labor. The women could collect greens and berries, so as to eliminate the preparation of a garden.

Walsh (1988) sums up the activities on a mid-seventeenth-century Virginian homestead in late fall after the tobacco was packed; new land was cleared, the resulting wood was cut for firewood, some cows and pigs were slaughtered and salted, and wild game were procured. The subsistence of planters in Virginia was a combination of maximum tobacco production and food self-sufficiency through agriculture, gathering, hunting, and domestic husbandry, along with local marketing networks (Walsh 1988). By the 1650s, a diversified agriculture, including the production of corn, wheat, cattle, pigs, had been accomplished. Not only was the Virginia colony able to support its 15,000 inhabitants and their domestic animals, but they were able to export grains and livestock to other New World colonies (Force 1844 in Otto 1989, Laing 1959 in Otto 1989:17).

The actions of both Indians and whites in this quickly changing social and economic atmosphere brought about vast and irreparable changes in the environment. Much of the land's transformation was accomplished because of the mistaken notion that there was such vast plenty and so few people, that the resources were boundless. The timber industry thrived in this region, as few tools and few workers were needed, and so many
of the indigenous trees had economic uses, including white oak, hickory, cedar, and long leaf pine (Silver 1990). The English changed the architecture of their buildings based on the abundance of wood and built larger houses with full timber construction with wooden shingles (Cronon 1983). The open fireplace construction utilized by settlers also required much wood. As early as 1648 there was a noticeable change in the forest, as Governor Wm. Berkeley described, "many thousand of Acres of cleer land, where the wood is all off of it" (Silver 1990:108). An act passed in 1678, in reaction to the "excessive and immoderate striking and destroying of fish" (Wharton 1957:33-34), illustrates the exploitation, and attempts at conservation, of fish.

There were many adverse effects of deforestation on the environment as outlined by Cronon (1983) and Silver (1990). Habitats for many species of animals were destroyed, including bears, wolves, foxes, panthers, turkeys, and pigeons. While the open fields may have provided prime grazing area for deer, they were also well suited for cattle (Silver 1990). The loss of the forest canopy caused the ground temperatures to fluctuate, becoming colder in winter, and hotter in summer (Cronon 1983). The first few years of deforestation caused the soil to warm, which caused an increase in nutrients. However, soon the soil began to dry out. The nutrient rich humus layer, which was described by one author as measuring up to two feet thick, was gone by 1635 (Miller 1986). With the
loss of the humus layer, the soil was apt to run off easily during rainstorms, thus silting the rivers and creeks.

In addition to the altered environment, there were other changes occurring which affected many aspects seventeenth-century life. Foodways, a concept which encompasses a culture's food procurement, distribution, preparation, consumption, selection, and conceptualization (Bowen 1992 after Anderson 1971), in Virginia differed greatly from those in England, because in the colonies there was an ongoing fight for survival. However, there were trends forming in Europe that the New World inhabitants were ready to rejoin, since a semblance of civilization was established. Before the fifteenth century, the marker of an elite table was not quality of food, but "ostentatious quantity" (Braudel 1979:187). Increasingly throughout the medieval period, "the social exchange and consumption of good food came to occupy a more important place in people's lives" (Wheaton 1983:41). By the late sixteenth century, foods and meals were used to, "delineate class, mood, and individual taste" (Wheaton 1983:231) All aspects of food and its preparation took on symbolic meaning that went far beyond its value as sustenance.

The differential access to resources based on socioeconomic status is a longstanding reality. Jay Anderson (1971) described the different diets of the gentry and yeoman in England: the gentry had a cuisine heavily influenced by Europe, with many spices, while the yeoman ate foods
accessible from home or local sources, such as beef, bread, beer, and dairy products. The gentry were able to afford a larger amount and a greater variety of foods, and more exotic ingredients and spices.

Throughout the middle ages and into the seventeenth-century, unusual birds and mammals were consumed by the wealthy, and therefore to be emulated. Both salt and freshwater turtles from the Chesapeake region were always considered by Virginians to be a luxury (Noel-Hume 1978). The terrapin, a delicacy found in the Chesapeake bay, was in the 17th century, "an indispensable course on menus designed for the entertainment of royalty and the discriminating elect" (Wharton 1957:16). But after 1670, exotic animals such as herons, wild geese, peacock, swan, crane, stork, egret, bittern, whale, and lamprey, which had been popular from the Middle Ages, were hardly mentioned or used in European cooking (Wheaton 1983). There was a trend in cuisine toward more subtle nuances of cooking, through which people could express their place in society.

During the seventeenth-century, the price of spices fell, and was readily available to the masses as well as to the aristocracy. Thus, spices were "no longer a symbol of wealth and luxury, they were used less and their prestige declined" (Braudel 1979:222). Other trends were found which could delineate status, "Differences in social standing were being expressed not only through differences in the quantity and
variety of food served, but more subtly through styles of cooking and serving" (Mennell 1985:75). Food preferences could indicate social aspirations; "The bourgeoisie, when they could afford it, emulated the carnivorous tastes of the warrior class, first quantitatively, later qualitatively" (Mennell 1985:303). The trend was to differentiate in subtle ways how food was cooked, arranged, presented, and with what company it was shared.

It has been said that throughout the seventeenth-century there was a "lack of distinctions between wealth groups and a peculiar homogeneity of Tidewater Chesapeake culture" (Carr and Walsh N.D.in Miller 1984:7-8). This may have been true for a large part of the century, but near its close there was increasing social divisions and clearer distinctions made, based on social standing and ownership of land and property. The people of the late seventeenth-century could look beyond their mere subsistence in a strange wilderness, and look forward to reaping the benefits of their toil in conquering their newly civilized land.
CHAPTER II

EARLY EIGHTEENTH-CENTURY CHESAPEAKE

The eighteenth-century Tidewater was greatly changed both environmentally and socially from the wilderness which greeted the first settlers of Jamestown. The colonists had established a strong foothold in the new land; houses, farm buildings, domestic animals, and tobacco fields were situated on vast tracts of cleared land. To a great extent, the wilderness was tamed, so that no longer did the settlers have to concentrate on daily subsistence. The self-sufficiency the colonists enjoyed allowed them the security to join the trend of pursuing leisure activities. While many of the initial problems faced by the early settlers were overcome by the civilizing of the land, new obstacles resulting from the transformed world had to be surmounted.

The increasing population, and the pressure it placed on limited resources was a cause for concern. Whereas land was easily attainable in the 1600s, by the turn of the century the greater part of land was already apportioned to the original settlers and their offspring. The rich soil and forests which had greeted the first settlers now were vastly dissipated.
Tobacco farming, which played a major role in the depletion of these resources, became less lucrative as prices declined, causing long-term economic depression. Various strategies were used to combat these problems, including more efficient farming methods, migration to frontier areas, and increased and diversified markets.

The decreased availability of good land for tobacco, grains, and livestock was to have significant economic and social consequences. Walsh (1988) notes that between 1660-1690, improved lands were seldom put on the market. This situation was due in a large part to inheritance practices; while the English custom of primogeniture, where the eldest son inherited the land, was followed, many planters employed partible inheritance, which divided one farm into smaller parcels for each child (Otto 1989). While cheap land with marginal agricultural soil could still be found, most of the prime land was owned, through inheritance, by the wealthier native born.

The majority of new settlers found that the dream of owning land was impossible because of the inaccessibility and inflated prices of good land. This situation, along with tobacco depression, caused an increase in leasing. Land which had previously had long term leases at low annual rates, now was leased at a higher rate for shorter terms (Miller 1984). These latecomers who had missed the time of early and easy land acquisition, became tenants, a state in which many were
destined to remain.

Since land in the Tidewater was all but unattainable, people headed to the wilder frontiers; lands to the south and the Piedmont. Lawson (1952), in his descriptions of North Carolina, states that the settlers of Virginia and Maryland were forced to buy smaller parcels of land, at greater rates, "Where a thousand Acres of good land cannot be bought under 20 (shillings) an acre" (Lawson 1952:81). Attempting to convince people to settle in North Carolina, Lawson related that each person could enjoy their own plantation, or park, with fish, wild-fowl, and venison.

Many farmers moved their families and livestock west to the Piedmont which offered good, affordable lands. The Piedmont provided forest land which could be cleared for tobacco fields and crops. The grasslands, resulting from annual fires, afforded prime grazing for cattle (Otto 1989). In 1710 a statute still existed which forbade settlement further than rangers could protect. But by 1720, a major migration, sanctioned by certain counties, brought many people to the Piedmont (Thompson 1942).

Along with the exploration and settlement of areas outside the Tidewater, this period is characterized by a diversification in farming and livestock practices, prompted by the decrease in tobacco prices and soil depletion. The intensive farming of the Chesapeake greatly expended nutrients from the soil, but was counteracted by the practice of
shifting cultivation which conserved soils (Earle 1975 in Otto 1989). Ideally, a plantation would be divided into three parts, consisting of agricultural land, meadows, and forest (Otto 1989). When agricultural fields were exhausted, they would lie fallow for approximately twenty years. By allowing fields to lie fallow, rather than fortify them with dung, the farmers were saved the labor of dung collection and plowing, and avoided planting tobacco in soil enriched with dung, which supposedly produced a very strong, unpopular flavor (Otto 1989).

The tobacco boom ended in 1685 when the English Parliament radically increased import duties on Chesapeake tobacco, thus greatly decreasing the demand (Otto 1989). Attempts were made to more efficiently utilize resources by tighter packing of hogsheads, and increasing the number of plants one worker could tend. The Virginia government had several regulations which would promote the quality of tobacco over the quantity produced (Walsh 1988). Planters now looked to other crops, predominantly grains, which could bring a large yield per acre and would be less harsh to the soil than tobacco.

Lorena Walsh's (1988) investigation of plantation account books and inventories throughout the Tidewater reveals to what extent early eighteenth-century planters diversified in raising various crops and animals. The lower James River planters produced planks and clapboards, butter, tallow, pork,
tar, pitch, and animal skins. The Carters and Byrds both produced tobacco, cattle, hogs, pork, and wheat. In addition, the Carters' farms produced corn, apples, cider, and butter. On one plantation, the activities of cidering, winemaking, dairying, fishing, beekeeping, brickmaking, and boat building were pursued. Also, marsh hay was cut for livestock, oats grown for plantation consumption, and wheat cultivated for market. Other commodities raised in the area include beans, oats, hops, malt, horses, sheep, turkeys and chickens (Walsh 1988). The increase in variety of crops, animals, and commodities from one plantation to the next also brought about an intensification of local markets and trading (Walsh 1988).

The raising of chickens, turkeys, and geese was often attempted because of the ease of upkeep; these animals could fend for themselves with a little food supplement to keep them from reverting to the wild. Wild foods, especially venison, waterfowl, and shellfish, were prized resources, and could still be used to supplement diets. Walsh suggests that small, marginal farmers near water, and big planters with extra labor resources could most easily utilize the abundant venison, oysters, crabs, fish, waterfowl, rabbits, squirrels, raccoons, and small birds for their table (Walsh 1988).

The concentration of land and wealth in the hands of a few elite equated into the increased social and political power in the same hands. In essence, a ruling elite emerged (Miller 1984). Walsh (1988) states that many plantations
invested in livestock and slaves in the first quarter of the 18th century. By the 1730's, there were many rich planters who could afford to dispose of their extra wealth in the form of homes, farm buildings, shops and imported goods.

The colonists had always looked to England for guidance in the political, religious, and social realms. The more affluent colonists followed the fashionable trends in England closely; they now had more time and money to spend on English fashions in clothes, furniture, architecture, music, and food. Beverley (1968) sums up this phenomenon pertaining to the tables of the upper class; "and as for Spicery, and other things that the Country don't produce, they have constant supplies of 'em from England. The Gentry pretend to have their Victuals drest, and serv'd up as Nicely as at the best Tables in London" (Beverley 1968:291). Wheaton (1983) notes that the eighteenth-century brought increased distinctions between the tables of the aristocracy and the merely prosperous. This divergence between the foods of different classes included not only the type of food served, but its presentation. Wheaton (1983) also suggests that refinement replaced abundance as the symbol of the elite.

This period also saw a change in what food items were considered most desirable on a fashionable table. The use of exotic animals was supplanted by domestic meats, though exotic animals are mentioned in narratives and account books throughout the 18th century. The aristocracy now took to
serving elaborate dishes of domestic meats which were cooked and presented in intricate ways (Bowen 1989b, 1992). Perhaps a typical table set by the Virginia gentry would be like the one characterized by W. H. Grove, a traveler in Virginia in 1732, "The Gentry at Their Tables have commonly 5 dishes or plates, of which Pigg meat and greens is generally one, and Tame fowl another. Beef, Mutton, Veal and Lamb make another. Pudding, often in the mid[dle], makes the 5th. Venison, Wild fowl, or fish a 4th" (Stevenson 1977:29). Governor Spotswood was known to eat various wild animals, including deer, goose, and on one occasion, a beaver (Noel Hume 1978). A traveler at Brandon Plantation, obviously aware of the snobbery attached to food proclaimed, "I leave to those of more epicurean taste to describe a Virginia dejeune. As are spread before you here, would tempt the most rigid monk.. to break his fast" (Virginia Historical Society 1894, vol.36:203).

The decreased use of exotic animals is not solely a result of their lack of availability, as many accounts boast of the abundance of wild and exotic game. The botanist Clayton attested to the great hunting in 1739, saying,
we have...great variety of wild ones as deer in great plenty, Bears, Buffaloes, wolves, foxes, panthers, wild cats, Elks, hares, ...raccoons, opossums, beavers, otters, muskrats... Then for fowls, wild turkeys, very numerous, partridges, wild geese, swans, brants, cormorants, teal, duck and mallard, black ducks, summer ducks, plover..., heath fowls (called improperly pheasant)... wild pidgeons in prodigious great flocks, fieldfares, woodcocks, snipes, herons, bitterns, eagles... (Virginia Historical Society 1894, vol. 7:173).

Also in 1739, the Byrd family described their land on the Roanoke River as full of buffalo, deer, wild turkey, with plenty of fish and wildfowl (Virginia Historical Society 1894, vol. 36).

Writing in 1702, a visitor to the area described the incredible abundance of wildlife, including eels, porpoises, turtles, fish and oysters, and waterfowl so numerous that hunters would not shoot at one or two, but would hunt uncounted numbers (Virginia Historical Society 1894, vol. 24, no.1). Robert Beverley (1968) who admitted himself to be no great sportsman, said he was able to kill over twenty wildfowl with a single shot, and stated that Indians also killed however many land and water fowl they wanted just with bow and arrows. Brickell, (1968) describing the conditions present in North Carolina in the 1730s, recounted tales of incredible flocks of 500 wild turkeys, some of which weighed sixty pounds. The pigeons, which were so numerous they could block out the light of day, provided oil which they used like butter (Lawson 1952).
Beverley stated that the Tidewater area provided, "Plenty of other Game, of all sorts, as cranes, curlews, herons, snipes, woodcocks, saurers, ox-eyes, plover, larks, and many other good birds for the table." (Beverley 1968:153). Many naturalists and authors listed the species present in the colonial period, and rated them according to taste, and noted whether they were considered edible to different cultural groups. Brickell (1968) lists twelve mammals out of thirty-three present in North Carolina that were good eating. He lists over fifty birds which were good to eat, including swan, partridges, larks and bluebirds; approximately thirty avian species are considered non-food, while a few species are supposedly only eaten by Negroes and Indians. Seventeen different types of shellfish, and thirty-seven species of salt and freshwater fish were considered edible by all groups. The Indians and Negroes are purported to eat five types of fish, including gar, that the English did not consider as food items.

Tidewater Virginia quickly became famous for some of its exotic foods, including terrapins, turtles, and sturgeon. The sturgeon were plentiful in Colonial Virginia, and grew to such an incredible size that one traveler in 1729 remarked, "I saw one cast upon the shore almost large enough to swallow a young Jonah" (Virginia Historical Society 1894, vol. 36:204). Land and water terrapins, and green and hawksbill tortoises were also considered fine eating. The loggerhead was considered by
Brickell (1968) to be Indian or Negro food. On the subject of turtles, W. H. Grove said, "The Negroes eat them, but few of the English more because their belly resembles an overgrown toad than for any ill taste" (Stevenson 1977:40).

The situation where three different cultural groups utilizing the same environment deem different items as edible, introduces an intriguing aspect of food and foodways. While many choices in diet are limited by availability and affordability, many food resources are available which are not chosen. Mennell (1985) lists four broad reasons for food avoidances: trained incapacity, fear of after effects (including social embarrassment), fear of social derogation, and moral reasons. For example, the way in which offal, or innards, are viewed today is somewhat contradictory. While it is a food category which primarily has socially derogatory connotations, it (tongue, tripe, sweetbreads) is also served at some of the better restaurants. Thus the place that culturally questionable foods hold in our food hierarchy cannot be inferred for the past.

Offal has long been associated as lower class food, possibly because it was given to the lower classes, as it did not preserve as well as carcass meat (Mennell 1985). In colonial Virginia, however, both pigs and calves heads were highly valued dishes which were served in a variety of ways at the most prestigious tables (Bowen 1992). W. H. Grove, in 1732, appears to admonish the hunter, who, by "throwing away
the Innards [they] deprive themselves of Bullocks heart, tripe, Calves feet, and Pluck" (Stevenson 1977:33). William Byrd found buffalo tongue and udder to be quite agreeable during his journey to the North Carolina frontier (Noel-Hume 1978). Thus these food items may have been eaten by high and low class alike, and their consumption dictated more by individual likes and dislikes.

Hunting for wild game in the eighteenth-century, while no longer necessary for survival to most, was still an active pursuit by many classes of people. That wild game was considered a delicacy is demonstrated by Lawson in his history of North Carolina, "A Quest after Game being freely and peremptorily enjoyed by the meanest Planter, as he that is the highest in Dignity, or wealthiest in the Province... A poor Laborer that is Master of his Gun, &c., hath as good a Claim to have continued Courses of Delicacies crowded upon his Table, as he that is master of a great Purse" (Lawson 1952:8). Surveyors involved with the boundary line between North Carolina and Virginia described a Mrs. Jones, a civil woman, who could carry a gun and kill deer, turkey, as well as wild cattle (Virginia Historical Society 1894; vol.5, no.1).

Many of the larger plantations were able to hire servants or charge specific slaves to hunt and fish as their sole duty. Brandon Plantation was described in 1729 as having slaves whose exclusive duties were to provide fish and land and watergame, so that there was "constantly fish enough and to
leave, for white and black; especially sturgeon" (Virginia Historical Society, vol.36:204). The smaller plantations would enlist slaves or servants to hunt and fish when the more important planting and harvesting was completed.

The masters of these plantations would also hunt wild game, the meat of which would end up on his table, sent as a gift to friends, or presented as social tribute to dignitaries. Robert Carter's son was known to go out fowling daily in the marshes near his home. William Byrd, in his diary which documents every meal, records that he partook of venison, partridge, blue wing, turkey, and pigeons; many of these meals with the Governor. Byrd only seemed to hunt small birds such as partridge and pigeon. The rest of the wild game which Byrd consumed or sent to the Governor was provided by servants and slaves on his many farms (Byrd 1941a).

It seems that not only was meat from wild game and fish enjoyed, but the activity of hunting itself was highly esteemed. Hunting was beginning to take on aspects of English hunting; it was evolving into an elite pastime with specific accoutrements, rather than an activity for subsistence. In 1736, Lord Berkely and Thomas Culpepper were granted land in the Northern Neck, with all rights to the "fish roial, deer, wild beasts, and fowl...together with the roialty of hawking and hunting for themselves, and their heirs..." (Henings 1820, vol. 4:514-515). The wealthier planters used their vast lands as a place to conduct social hunting outings for their
friends.

In 1739, a Virginian gentleman-botanist was asked by an English counterpart to describe hunting practices in the colonies. His narrative suggests a somewhat organized system of hunting; "Now the gentlemen here that follow the sport place most of their diversion in shooting Deer...they send their servants with dogs to drive em out and so shoot 'em running" (Virginia Historical Society 1894 vol. 7:173). He continues, saying that foxes are hunted with hounds, and waterfowl are retrieved with water spaniels, as in England. Hares were also hunted with small dogs who would chase them into the hollow of a tree (Virginia Historical Society 1894 vol.17). The increasing popularity of hunting as sport is further suggested by the importation of English hounds by Dr. T. Walker of Albemarle in 1742 (Carson 1965). Shooting of turkeys and quail was considered a "diversion" worthy of a hunter. Fishing, in the form of angling, was also a very popular sport. Other fishing methods were utilized to catch large numbers of fish including seines, weirs, and traps.

The privilege of hunting on private land, as in the seventeenth-century, was strictly guarded. An act passed in 1705, and renewed in 1737, imposed a heavy penalty of 500 lb. of tobacco for anyone caught hunting, fishing or fowling upon the lands of another (Henings 1823, vol. 3, Mercer 1737). Only in the instances of hunting wolves, squirrels, and crows, were there extreme leniency in hunting on private land. The
hunting of these vermin (although squirrel was also eaten) was encouraged, and generously rewarded. Three hundred pounds of tobacco was offered as payment (100 lbs. to Indians) for killing a wolf in 1714 (Winfree 1971). This was reenacted in 1737, with 200 pounds of tobacco as compensation. In the same year, an act was passed which required every tithable to produce three crow or squirrel heads, or pay a fine in tobacco (Mercer 1737). The wolf population was greater in frontier areas, and the wolf problem considered so bad, that in Augusta County in 1742 the people petitioned to have a tax levied which would pay for hired hunters (Virginia Historical Society 1894, vol.13).

There is much conflicting evidence as to the abundance of wild animals in the eighteenth-century. While there are many accounts pertaining to the remaining bounty in the Chesapeake, there was a decided decrease in the numbers of wild animals, as indicated by writers like R. Beverley who noted early in the eighteenth-century, "all that the English have done... has been only to make some of those Native Pleasures more scarce, by an inordinate and unseasonable Use of them; hardly making Improvement equivalent to that Damage" (Beverley 1968). Early in the century it was noted that the Tidewater's game was less abundant than in less populated areas, "Their venison in the lower parts of the country is not so plentiful as it has been, though there be enough and tolerably good; but in the frontier counties they abound with venison, wild turkeys" (Jones 1956
in Miller 1984:279).

The over-exploitation of oysters by the inhabitants of St. Mary's City, Maryland was demonstrated by Miller (1984). As the population of the city and surrounding area increased in the late seventeenth and early eighteenth-centuries, the size of the oysters decreased inversely, suggesting greater pressure to harvest the mollusks before they had sufficient time to grow. The sport of turkey hunting was considered viable only in the frontier areas, because only on the frontier were the forests thick enough to support a wild turkey population (Virginia Historical Society 1894, vol.17). In 1728, William Byrd, traveling into the interior, advised those traveling with him to bring enough food for ten days, as it would take that long to reach a place where wild game was plentiful (Silver 1990). Laws were enacted throughout the eighteenth-century in an attempt to conserve wild mammals, fowl, and fish.

As early as 1705, the decrease in abundance of deer was noted; Beverley commented on the price of deer, which sold at "eight, ten, or twelve shillings a head, according to scarcity" (Beverley 1968:291). Several reasons for the decline in deer population were outlined in a 1738 act. The use of hounds for hunting caused indiscriminate killing of deer herds; does and fawns, which represent the perpetuation of the species, were more easily killed. Firehunting was not only detrimental to a large population of deer, but affected
cattle, their food, and timber. The trade in deer skins got to be so lucrative that deer were killed solely for the skins (Henings 1819, vol. 5). Statistics on the number of deer skins traded in the early years of the century indicate the extent to which the deer population affected. South Carolina exported 64,488 deer skins in 1698-99; and varied between 10,289 and 80,324 in the years 1699-1715. In this same period, the Virginia trade exported between 849 and 34,387 per year (Gray 1941:137).

The laws enacted against hunting deer were aimed primarily at commercial hunting, specifically for skins. Provisions were often included in the laws and acts which allowed for freeholders to hunt on their own land, and frontiersmen to hunt, providing the skins weren't sold (Henings 1819, vol. 5). The first closed season on deer was enacted in 1699, and extended from February 1 to July 1. A more stringent act was passed in 1705, increasing the closed season from January 1 to August 31, with a penalty of 500 lb. of tobacco, or thirty lashes for servants or slaves caught hunting (Henings 1823, vol. 3:462). In 1734, the penalty for breaking the same closed season was fifteen shillings (Henings 1820, vol. 4:425).

The most encompassing laws were passed in 1738, when an act declared a closed season on bucks from December 1 to July 31, for does and fawns from January 1 to October 30, with a twenty shilling fine. In addition, fines were instituted for
buying deer skins out of season, fire-hunting, hunting on anothers' land, and for not enclosing hunting hounds and beagles in kennels. A game constable was employed at this time, who had the power to search any suspect person or place. If a person was charged with illegal hunting or trading in skins, he was considered guilty unless it could be proven otherwise (Henings 1819, vol. 5:60). In 1727 an Act to Prevent the Destruction of Wild Fowl was implemented with a forty shilling fine. The waterfowl were being hunted from rafts and shore, both day and night. Such hunting practices were "likely to have the ill Effect to Cause the Fowl wholly to desert and disuse the said towns" (Stephen Miller 1986:79). Unfortunately, it is difficult to determine whether these measures deterred a good portion of illegal game hunting, or were essentially ineffective.

The depletion of large forests due to misuse and the increasing demands of a larger population closely paralleled the depletion of wild food resources. In the long established areas, timber was becoming scarce in the early 1700's, and deforestation was a genuine problem by the mid-eighteenth-century (Walsh 1988). Beverley (1968) describes the attitude about wood at the turn of the century, "Their fewel is altogether Wood, which every man burns at Pleasure... In all new Grounds it is such an Incumbrance, that they are forced to burn great heaps of it, to rid the Land. They have Pit-coal... but no Man has yet thought it worth his while to make
use of them, having Wood in Plenty, and lying more convenient for him" (Beverley 1968:294). Firehunting was also considered a culprit in deforestation; a 1716 manuscript blames firehunting for the loss of hundreds of square miles of forests (Tyler 1966, vol.19:87). However, in 1724, Hugh Jones described the colony as "one contrived forest" with "patches of some hundred acres here and there cleared" (Jones 1724 in Silver 1990:110). People who had used up their wood resources resorted to buying timber from neighbors who had larger tracts of timberland.

Beverley condemns English resource utilization when he remarked "The English have taken away great part of their (Indian) Country, and consequently made everything less plenty amongst them" (Beverley 1968:233). Hunting and overhunting was done by both whites and Indians. However, there existed different sets of laws concerning hunting for the two cultures. While a 1691 law allowed free trade between the Indians and Whites, a 1705 act said that Indians were no longer allowed to be employed to hunt, as "said Indians do hunt and range over all the neighbors land adjacent or near thereabouts where the persons that employ them dwell, and not only kill up the Deare (whether they are in Season or not) but also disturbed and destroy many of the Englishman's Stocks" (Winfree 1971:18). One hundred pounds of tobacco was the fine imposed for anyone hiring an Indian (other than Pamunkey or Chickahominy Indians, who were considered friendly) to hunt on
patented lands, and anyone who caught an Indian hunting could confiscate the gun and shot (Henings 1819, vol. 5). In an Abridgement of Public Acts of Assembly for 1737, the fine was increased to 1000 lbs. of tobacco (Mercer 1737). The tributary Indians were again singled out as the only Indians with permission to fish, oyster, and gather oats, and other wild foods that the English need.

By the early eighteenth-century, the Indian populations had been greatly depleted, primarily through diseases carried by the English. The Indians were now viewed quite differently by the English. Since the Indians were relatively docile and so few in number, thus, no longer a threat to English safety or English domination, they were to be pitied or treated with charity. This situation is illustrated in an excerpt of William Byrd's diary; when he was presented with six Indians who had been found hunting on patented lands, Byrd threatened them, provided them with a meal, and then sent them away (Byrd 1941a). The English could afford some benevolence for their once powerful, but now conquered, enemy.

Now that they were not fighting the Indian, or competitors for land and resources, the English were able to perceive the Indians as distinct cultural groups. All the overlooked aspects of Indian culture were now appreciated, including government, family organization, religion, justice systems, and arts (Nash 1972). A missionary in South Carolina, Le Jau, said the Indians "make us ashamed by their
life, Conversation and Sense of Religion" (Klingberg 1946 in Nash 1972:229). This new found admiration for the now tame Indians coincided with a movement in England which glorified the wild in nature and criticized civilization. This new attitude coexisted with the old perceptions of wilderness (Nash 1972). The growing trend in England was that now that the wilderness was lost, it was to be glorified.

By the mid-eighteenth-century, the inhabitants of the Chesapeake appear to be quite content with their environment. There is evidence that the natural resources were depleted by this time, but not to such an extent that most species of animals could not be found in the area. Planters were faced with the limitations of the environment, but were able to incorporate new strategies which still allowed the land to work to their advantage. Of primary concern to the Virginians was the continuation of a highly profitable and comfortable way of life. They no longer had to worry about the taming of the land and the civilizing of the Indian.
CHAPTER III

MID-EIGHTEENTH-CENTURY CHESAPEAKE

The middle eighteenth-century Chesapeake was characterized by a divergence in strategies employed to cope with the ever-changing environmental and social milieu. The decreasing accessibility to land, wild animals, and trees gave rising awareness to the limitations of these natural resources, which caused them to be utilized more efficiently. The problems arising from the overuse of tobacco farming precipitated an increase in the types of crops planted, and a diversification in farming techniques and domestic industries. These farm and plantation enterprises produced a large number of goods and services which supplied local, and to a smaller degree, urban markets. Following the English fashions, the Virginia gentry transformed their wealth into material goods and land, furthering distinctions between socioeconomic groups. Tobacco endured as the major cash crop throughout the Chesapeake, despite the downturn in the market earlier in the century. In the 1730s, the tobacco market recovered because of the addition of the French as consumers of Chesapeake tobacco. The Scots, after the formation of a union
between the English and Scottish kingdoms in 1707, began to buy a large amount of the tobacco. They then reexported it to France, which by 1775, consumed one quarter of the annual tobacco production of Chesapeake (Price 196:4507-510 in Otto 1989:25). The higher prices fetched for tobacco, along with the continued reliance on a diversity of crops and domestic activities, furthered the Virginians' endeavors at self-sufficiency.

While there may have been a limited amount of self-sufficiency on large plantations until 1764, account books demonstrate that there were increasing numbers of activities on small farms and larger plantations, including tanning, dairying, shoemaking, smithing, spinning, weaving, and soap and candlemaking (Walsh 1988). Products resulting from these industries could be utilized at home, traded to neighbors, or sold at local markets. Paralleling the expansion of home industries was the increasing diversity in types of seeds and grains grown, as farmers experimented with crop variations which could produce a high yield and not deplete the soil's nutrients.

The bottom land of the Tidewater continued to be a highly prized commodity. Many planters were faced with the problems of limited pasturage for their cattle and decreasing soil fertility. Different planters reacted in various ways to these limitations. Along the lower James, planters grew wheat and oats, grains which could prosper in worn out soils without
the time consuming task of spreading manure. A small estate owner in the 1740s, carefully planned that all the animal manure was to be saved for the tobacco fields. Some planters abandoned tobacco as the main crop; George Washington shifted from growing tobacco to wheat in the 1760's, as did Robert Beverley in 1774 (Walsh 1988).

Not all farmers, however, diversified their crops or made good use of all the available resources. An 1774 account by Fithian, a Northern tutor, describes a Chesapeake farm, apparently run the way it had been for quite a while, with no hope of improvement:

People are universally plowing up their Land for planting corn & for Tobacco. And in one field I saw several Women planting corn. I think however, it is early even here-- They raise no Flax, their Land in general being so poor that it will not produce it-- And their Method of farming is slovenly, without any regard to continue their Land in heart, for future Crops-- They plant large Quantities of Land without any Manure, & work it very hard to make the best of the Crop, and when the Crop comes off they take away the Fences to inclose another Piece of Land for the next years tillage, and leave this a common to be destroyed by Winter & Beasts till they stand in need of it again. (Parish 1965:89).

Forests and wild animals were still plentiful enough to contribute to the Chesapeake economy and foodways. The utilization of the available natural resources not only provided some landowners with a source for extra income, but for others supplied the means for economic survival. A Maryland shore farmer utilized not only a different mix of crops, but harvested such resources as timber, deer,
partridges, and fish (Walsh 1988).

Fish were utilized extensively, as they could be caught in numerous ways, including nets, lines, or seines, and then could be eaten fresh or preserved in salt for later use. A variety of species were usually quite accessible to farms situated on the rivers, and many fisheries were established for plantation use and as commercial enterprises. The organization of fisheries, defined by Virginia law as a "regularly hauled fishing landing" (Wharton 1957:49), was relatively easy to establish by landowners with a little extra capital. Thomas Jefferson and George Washington both owned thriving fisheries, and Landon Carter, a rich Virginia planter, participated in seine fishing on the Potomac each spring. Washington's diary mentions hauling sein primarily for shad and herring, with some dragging for sturgeon. His fishery on the Potomac supplied not only his plantation and local markets, but shipped the surplus to Philadelphia and the West Indies (Walsh 1988). While this was primarily a commercial venture, part of the catch was used as slaves' rations (Pogue and White 1991). In addition, Washington allowed the poor to fish on one of his shores, which may have been a common practice among plantation owners (Wharton 1957). There were also good prospects in the harvesting of oysters, which had such fans as George Washington and Landon Carter. Oysters were prodigious, and could potentially be preserved for weeks if needed, if kept moist. The prominence which
oysters held is suggested by the full time employment of an oysterman for one landowner from 1779-1789 (Walsh 1988).

In the mid 1700s, small villages were established near the prospering tobacco warehouses, and modest growth was perceived in the size of many small towns. Numerous planters produced surpluses of goods, crops, and livestock, and could supply growing urban markets, as in Williamsburg, Hampton, and Annapolis. The Burwell plantation on the York River in the 1750s was able to supply extra products and domestic animals primarily for the Williamsburg market, and the remainder was sent to the West Indies (Walsh 1988). As the urban markets grew in popularity throughout the 1760s and 1770s, planters concentrated more on supplying diverse crops and animals for market consumption.

The eighteenth-century saw increasing distinction between the socioeconomic classes. With the turnaround in tobacco prices, the gentry were able to attain even more wealth. There was increased emphasis on attaining the attributes of the upper class, where the "gentry society was marked by adoption of an increasingly elaborate material culture in the 1760s-1770s and by increasingly sophisticated leisurely pursuits" (Walsh 1988 Chap 5:4). The excess of wealth allowed the gentry to make conspicuous purchases which would demonstrate their high social standing. The Lloyds, a wealthy planter family, by the 1770s owned a stable of race horses, a deer park, and pleasure boat. The Carters exhibited their
affluence by buying expensive English clothing, furniture, silver plate, fine wines, carriages and race horses, and English educations for their sons (Walsh 1988)

This ostentatious high living had its drawbacks; in the pursuit of transforming capital into highly visible and fashionable possessions, many of the gentry spent beyond their means. This situation only got worse as the next generation got accustomed to these spending habits, while less attention was spent on plantation management and acquiring capital. If any problems occurred with crops or livestock management, and profits were less than expected, the high living could leave the planters in serious debt. The Carters experienced such unexpected problems in the 1760s and early 1770s, when their plantations were plagued by excessive rains, droughts, hurricanes, and late springs followed by early frosts (Walsh 1988).

The trend of conspicuous consumption extended to the foodways of the gentry, which can be elicited through historic diaries and accounts. The majority of accounts concerning food were written by people of middle or upper class, as they had the leisure and knowledge to write. There is also some documentation concerning the diets of slaves, as accounts were kept by the overseer and owner as to their rations. While some insight can be gained into the food and tables of the upper classes, and slaves, little can be discerned about the lower classes from historic diaries. Wild and exotic foods
are often mentioned in journals throughout the second half of the seventeenth-century. A traveler in Virginia in 1746 depicted a typical dinner of the gentry as having "good beef, veal, mutton, venison, turkies and geese, wild and tame, fowls, boil'd and roasted" (Tyler 1966, vol.15 no.3:146). Philip Fithian, a tutor hired by a wealthy Chesapeake family, kept a diary which often included a description of the daily meals. He often mentions the different fish served, and says "Each Wednesday & Saturday we dine on fish all the summer, always plenty of Rock, Perch, & Crabs, & often Sheepshead and Trout" (Farish 1965:171).

The palace account books for 1769-1770 list the items that would have been served to the Governor and his family, including a number of exotic, wild birds, mammals, fish and turtles; hummingbird, mockingbird, partridge, red bird, swan, hawk, teal, shelldrakes, turkey, wild duck, wild fowl, and wild goose, hares, venison, eels, and turtles (Palace Account Books 1769-70). In 1785 it was still fashionable to send wild animals as tribute; George Washington received a Swan and four wild geese as a present from his brother John (Jackson and Twohig 1978). A diary from Cawson, 1795 lists the repast of many meals, including wild ducks, roast turkey, hare, stewed fish, sturgeon, pigeon pye, and drest turtle (Cawson 1795).

Turtles, especially the green turtle, seem to have remained popular throughout the century. In 1751, a sloop named Providence brought twenty live green turtles into
Virginia for sale (Noel Hume 1978). Cawson (1795) relates that a Mr. Perkins went to the hundred, in an attempt to buy a turtle that had just arrived on a ship from the Bay of Honduras. In 1778 Landon Carter was brought, "what the Epicures call a fine Hawks bill turtle. I eat none, but Others may" (Carter 1778:1142). Indicating the fashion of the day, a traveler on a sea vessel near the Azores related:

> we took 6 Turtles or Tortoises. Whether the fault may be in the cooking.. I cannot tell, but nobody liked the fashionable viand, it being strong and oily, tho' these were of the Hawksbill and Loggerhead, and it seems it is the Green Turtle only which forms the modern English Entertainment (Tyler 1966, Vol. 17:110).

There is evidence that exotic animals, and parts of animals, such as innards and head, were highly esteemed. However, a growing movement in Europe would make recognizable animal parts such as head, eyes, testicles, and other organs less popular (Mennell 1985). At this time, animals were acknowledged as having certain qualities, such as emotions, and ability to feel pain, which were previously not attributed to them. People began to perceive animals as more than just food, and tried to avoid blatant correlations between live animals and what was served on a dinner plate (Thomas 1983).

Associations between animals and carcass meat were avoided in several ways. During this period, laws were enacted which required slaughterhouses to be moved to the outskirts of towns, so the killing of animals could be avoided
by the majority of the population. There was also a tendency to disguise the readily identifiable animal organs before they were sent out to the table. Social forces can also be used to overcome the stigma attached to eating certain animal parts, as illustrated by the French, whose fashionable dishes (made-dishes) required the use of offal (Mennell 1985).

The sport of hunting continued to acquire attributes of the elite English pastime, as suggested by a letter sent by a Virginia landowner to a friend, "Whenever I find there is sufficient of Deer on my lands to create good and successful sport at a proper season... all my neighbors are welcome to attend" (Virginia Historical Society 1930, vol.38). As noted by the teacher Fithian, the boys of the family were often "daily fowling," though seldom catching anything (Farish 1965). Thomas Jefferson would hunt squirrels and partridges, but apparently did not enjoy large game hunting. George Washington hunted pheasants and ducks, and was an avid foxhunter; foxhunting 46 times in 1768, and 45 times in the ensuing two years. His foxhunting adventures dropped off after that year, presumably because of other constraints on his time (Jackson and Twohig 1978).

Wealthy white men were not the only ones who hunted, but most likely the only ones adhering to a code of hunting etiquette. The less wealthy also hunted, but their activities are not as well chronicled. The references to the hunting practices of Indians in the second half of the eighteenth-
century are few. A traveler in Virginia in 1759 states that
the Pamunkey Indians main employment was to hunt and fish for
the neighboring gentry (Maxwell 1848, Vol. 5).

Documentary evidence is more encompassing for slaves, as
overseers and plantation owners carefully accounted for the
types and amounts of rations distributed. Larry McKee, in his
dissertation of slave foodways, suggests that slaves hunted
and foraged for the plantation house table, at the direction
of the master (McKee 1988). The slave hunter probably enjoyed
a somewhat higher status than other slaves, in that he would
be excluded from field work, and could possibly hunt a little
for his family on the side (Steen 1992). Slaves were able to
add to their table through hunting and fishing on their free
time; possibly more for sport rather than out of necessity
(McKee 1988). Slaves were limited only by seasonal
availability of species, and access to guns and free time
(Otto 1975, McKee 1988).

In 1771, a planter on Maryland's lower eastern shore,
provided this free time to his slaves by allowing them to take
every Saturday afternoon off. It is quite possible that the
slaves utilized this personal time to hunt and fish, and tend
their gardens (Walsh 1988). Evidence also suggests that
George Washington's slaves were able to supplement their
diets, composed mainly of pork, fish, and cornmeal, by raising
chickens, fishing, and hunting small game; possibly using guns
(Pogue and White 1991).
Narratives throughout the eighteenth-century expound on the prodigious numbers of fish, especially sheepshead, rock, drum, white perch, herring, and oysters. The bounty of fish was noted by Philip Fithian, who saw on the Nominy in 1774, "fishermen in great numbers in Canoes, & almost constantly taking in Fish Bass & Perch" (Farish 1965:145). Sturgeon were still to be found in such great number that one author wrote, "in the space of two miles only, some gentlemen in canoes caught above 600... with hooks" (Maxwell 1848, Vol. 5:35).

A substantial number of game animals were present in Virginia in 1759, including hares, turkeys, pheasants, woodcocks, partridges, ducks, squirrels, raccoons, beaver and deer (Maxwell 1848, vol.5). A similar text written about Prince Georges County in 1793 by the Rev. John Spooner, lists a large amount of fish, and game birds, but only a few pheasants and some deer (Tyler 1966, vol.5, no.7:3). In his Notes on the State of Virginia, Thomas Jefferson lists 126 species of bird still present late in the eighteenth-century. These narratives all attest to the abundance of some species, and the presence of others at specific times. Unfortunately, proclamations of the profusion of wild game may be because the authors were accustomed to a place where game was scarce (i.e., England).

Thomas Jefferson proudly stated that Virginia laws were enacted for the "preservation and improvement of the races of useful animals, such as horses, cattle, deer; to the
extirpation of those which are noxious, as wolves, squirrels, crows, blackbirds" (Jefferson 1955:135). Because many of the same problems encountered earlier in the century, such as the presence of wolves and other vermin, and dwindling numbers of deer, were still prevalent, many of the same laws were reenacted. The abundance of wolves was apparently so severe at Monticello, located in the Piedmont, that the slave quarters and sheep had to be penned in (Bear 1967). An act passed in 1769 which extended until 1772, increased the reward for killing wolves an additional fifty pounds of tobacco for wolves four months and under, and one hundred pounds for adult wolves. In addition, each tithable was now expected to surrender five crow or squirrel heads (Henings 1821, vol.8).

Several statutes, in 1745, 1762, and 1771, were instituted which regulated the damming up of rivers, by which method, fish could more easily be trapped. The success of these statutes is questionable, as even Thomas Jefferson, who practiced animal conservation, owned a dam on the Rivanna River which was in place from 1757 to at least 1809 (Wharton 1957).

The majority of laws and statutes concerning wildlife focused on the preservation of deer; a 1748 law mandated a twenty shilling fine for killing deer by firehunting (Henings 1819, vol.5). In 1761, a fine of twenty-five shillings, or five lashes, was imposed as penalty for killing deer on the frontier, leaving the meat which could nourish the wolves, and
not paying duty for the skin (Henings 1820, vol.7). A law passed in 1772 admitted that other acts had not worked, and revealed that whole herds of deer were being wiped out by people hunting with dogs in deep snow. Because of the severity of the deer shortage, there was to be no killing of deer for four and one half years, until August 1776. The fine for killing wild deer, and tame deer (who wore bells) was decreed as fifty shillings or twenty lashes (Henings 1821, vol. 8:592).

While the penalties for killing deer were getting increasingly severe, the maximum penalty was not always incurred. A 1795 court record chronicled the trial of three men accused of killing three deer out of season, in violation of the 1738 act for preservation of deer. While they pleaded not guilty, a verdict of guilty in killing two deer was reached and a five pound fine proclaimed.

Virginia was not the only colony suffering from a shortage of deer, as suggested by the adoption of deer conservation legislation in neighboring areas. In 1768, a law was passed in North Carolina which entitled the hunting of deer to those people who could prove that they had first tilled 5,000 hills of corn. In the following year, South Carolina passed a law making it illegal to hunt less than seven miles away from home (Silver 1990). In Maryland, legislation against the overhunting of deer was instituted as a result of diminishing deer herds due to hunting in deep
snow. As described by Eddis, in 1770, the deer would easily tire of running, and thus "great multitudes of them were annually slaughtered and their carcasses left in the woods" (Eddis 1770:33).

The images painted of the bounty of wild animals in Virginia contrast sharply to other voices which decry the loss of wildlife. A visitor to America in 1798 stated that, "very little of what is termed game to be found in any part of America I visited" (Parkinson 1799 in Pryor 1979:4). There are indications that many fish species had greatly decreased populations by the nineteenth century. Col T. Randolph (born in 1792) wrote a letter to the Virginia fish commission in 1875, stating, "When young, I have heard the old people speak of an abundance of other fish...the clearing of the country and consequent muddying of the streams had destroyed them" (Wharton 1957:69-70). Bears, turkeys and wolves are a few species that had all but abandoned the Tidewater area by mid-century, seeking refuge in the less populated, and more heavily forested Piedmont and mountain regions.

In addition to the enactment of laws, conservation efforts were also attempted by individuals on their lands. George Washington and Thomas Jefferson, though both hunters of small game, maintained deer parks which they avidly protected against hunters and dogs (Bear 1967, Carson 1965). At Monticello, slaves were sent to feed the tame deer twice a day (Bear 1967).
Planters found various ways of conserving their limited and quickly diminishing resources, especially as the timber shortage became more apparent. In the 1740s, a small planter named Ball, ordered that fence rails were to be constructed of pine trees, trees that had blown down, or been cut for timber (Walsh 1988). Another farmer in the 1750s realized his lands' resources were quickly being depleted, leaving little inheritance for his children, thus stopping any indiscriminate clearing (Walsh 1988).

The Revolutionary War resulted in the over-exploitation of animal and timber resources as supplies for the militia. The plantations supplied such a large amount of resources for the effort, that Nathaniel Burwell, a Chesapeake planter, may have used all his trees and timber by the end of the war (Walsh 1988). The devastation was so severe, that a French officer visiting Virginia in 1781 stated, "without vehicles, without wood,...a country absolutely stripped of everything... exhausted by the Americans and laid waste by the English" (Walsh 1988:48).

The conservation of local resources became of primary concern to planters. William Lee, in 1789, ordered that no more land be cleared except to obtain wood for fires, housing, fencing, and cask and wheel making (Walsh 1988). This order denotes a conservation ethic, but also illustrates the great need for lumber and wood. In 1807, Jefferson similarly told an overseer not to cut down any trees, as long as there was
one already cut down. While he had remaining timber resources, his neighbors were not so fortunate; Jefferson had signed contracts with neighbors who paid him for firewood (Bear 1967).

The altered views on animal and timber conservation were a result of peoples' acknowledgement of diminishing resources, and the realization that these resources must be perpetuated. The conservation of wildlife also indicates the participation in a growing trend, started in Europe, which romanticized the wilderness. There was now an appreciation of the ethical and aesthetic values of the wilderness, and a preference for the untamed, natural landscapes (Nash 1978). The wilderness represented a lost innocence, which was based on an idyllic and false presumptions about rural social relations (Thomas 1983). It was to this unaltered wilderness to which people now wanted to return.

This change is illustrated in the writings of Byrd in the History of the Dividing Line; originally written in 1728. The original text reflected the pioneer spirit, where the wilderness was to be feared and tamed. In a late eighteenth-century revision, he added comments about the good, delightful, and pleasurable wilderness, thus, reflecting his refinement and the fashionable attitude of the day (Nash 1978).

This attitude was further amplified in America with a craze of nationalistic pride. People searched for something
uniquely American, and found it in the incredible wildness of the country. The untamed frontier, the extraordinary abundance of wildlife, and the presence of Native American Indians, could be glorified as uniquely American. As with the landscape, the perceptions of the Indians changed drastically, "from the guileless primitive of certain 16th century writers, to the savage beast of colonial frontiersmen, to the noble savage" (Jordan 1968 in Nash 1978:197) of eighteenth-century social critics.

The Virginians, by extensively utilizing the environment for over two hundred years, were left with an environment more similar to that which was left behind in England than that which greeted the first colonists at Jamestown. They were so very successful at taming the wilderness; the wild animals, Indians, and other resources, that now these lost aspects were glamorized. There was a nostalgia for the wilderness, which no longer represented the devil and evil, but rather an innocence and simplicity which was greatly craved in the increasingly populated and quickly paced milieu of early nineteenth-century Virginia.
While historic documents allow insight into the social and physical environment of the seventeenth and eighteenth-centuries, a more complete picture of this time period can be elicited by utilizing knowledge from other disciplines, most specifically, archaeology. Archaeological investigations throughout the Tidewater have produced a large body of material which pertains to all aspects of colonial life - construction techniques, landscaping and land use, material culture, consumer trends, animal husbandry, and foodways - to name a few. Archaeological data provides many different classes of material which can be used to study foodways, including cooking and serving wares which indicate how food was presented and served, and macrobotanical and faunal material, which are the actual remains of meals. The use of ceramic, botanical, or faunal analyses in conjunction with historic documentation (including the investigation of cookbooks) presents an holistic approach which offers greater potential for accurate insight into the mindset and activities of colonial Virginians.
Zooarchaeology is a relatively young field of research used in the reconstruction of past lifeways. While there are certain limitations in this field, because of the unique attributes of archaeological faunal assemblages, there has been much research and experimentation in the attempt to identify, isolate, and remove biases and inconsistencies. This is no easy task, as is demonstrated by the following which outlines some of the problems encountered by faunal analysts and archaeologists.

One of the forerunners in zooarchaeology, R. E. Chaplin (1971) noted that the origin of a faunal collection must be known and that the nature of bones must be understood. In addition, one must determine how representative the assemblage is of the site in general. This requires the acknowledgement that bone is susceptible to a number of destructive agents. Due to a number of chemical, and physical agencies, and human and carnivore activity, very little of what was originally deposited is recovered from a site (Maltby 1979:3). Chaplin felt confident that the recovered assemblages are representative of what was originally deposited, but that the original proportions could never be known (Chaplin 1971:120). Since that time, much energy has been exerted in research and experimentation concerning the nature of bone and the many detrimental agencies affecting it.

Mark Maltby, who has done extensive work with faunal remains throughout England, has outlined the many stages, or
transformations, where bone is affected. Original information is lost at each transformation, thus, the scope for variation between sites - even between different assemblages at one site - is enormous (Meadow 1976, 1980 in Maltby 1985:35). These stages include: cultural practices (butchery, ritual, cooking), disposal patterns, postdepositional or taphonomic agencies, excavation and recovery methods, and the methodology of the faunal analyst. Cultural practices and utilization of bone greatly influence the faunal assemblage originally deposited. Bone can be butchered in a number of ways, cracked open to remove the marrow, or left whole. The meat and bone can be cooked above or in a fire, or boiled. Bones can be manufactured into tools, thrown to the dogs, left on the ground where they are chewed by other carnivores or trampled, or possibly deposited in a pit which is filled in relatively quickly. Each of these options will influence what type of faunal assemblage is ultimately excavated.

The nature of specific bones, and the amount and type of breakage greatly affects whether, and in what condition, bone survives. Various elements and types of bone are affected by differential preservation. All faunal assemblages are biased to denser bones, as they can better withstand the harmful physical and chemical agents. When broken, and the inside of the bone is exposed, bones have less of a chance of being preserved than if they were disposed of whole. The interior cancellous bone is also easier for carnivores to chew.
Formation processes, as described by Schiffer (1987), affect the makeup and deterioration of faunal assemblages. Bones deposited as part of sheet refuse on the ground surface will be more quickly be affected by weather, trampling, and scavenging by carnivores than a bone which is quickly covered over. In addition, certain soil types are more detrimental to faunal material than others. Acidic and sandy soils tend to more quickly destroy bone, while alkaline and calcareous soils are apt to preserve them (Davis 1987).

It is recognized that the presence of a faunal assemblage is initially attributable to cultural activity (Gifford 1978). The assemblage is then altered by a number of non-cultural processes. The study of these processes, called taphonomy (formational history), investigates the "transition of animal organics from the biosphere into the lithosphere", and whose elements include mode of death, transport or dispersal, accumulation, disarticulation, fragmentation, mode of burial, and chemical alteration (Lyman 1982:337). Diane Gifford (1981) states the two goals of taphonomic analysis are to identify biases so that a taphonomic history of mechanical actions can be written, which can then be used to portray a record of the living fauna.

Not only can a faunal assemblage be altered by chemical and physical processes during its use and subsequent deposition, but it can be affected by different excavation methods, recovery technique, form of analysis, and the
expertise of the analyst (Lyman 1982, Reitz 1987). A significant intent of archaeological testing and excavation is that a large enough sample is retrieved which is representative of the site. Even after artifacts have been removed from the ground, there is great potential for variation between sites based on the screening or retrieval methods utilized.

Many zooarchaeologists have investigated various retrieval methods, and found that unscreened material is biased to large mammals (Payne 1972, 1972a, Payne 1975 in Maltby 1985), while other archaeologists believe that a representative assemblage is retrieved through only hand trowelling. Schaffer (1992) ran a series of screening experiments and found that by utilizing 1/4" screen, most elements of mammals from a small weight class would be missed, and determined that the resulting assemblage would not accurately demonstrate either taxonomic abundance, or even presence versus absence (Schaffer 1992:131). He notes that these biases can be predicted, and can be overcome by only utilizing taxa or elements with similar recovery ratios for analysis.

Once in the zooarchaeology laboratory, there is still room for variation based on the analyst's methodology and expertise, the presence of a comprehensive comparative collection, and the production of accurate and comparable results. Above all else, zooarchaeologists have worked to
identify problems and biases within the discipline, and find methods to rectify them. In addition, it is of primary importance for analysts to produce reports with analogous data, to allow for comparative analysis between sites and regions.

It is necessary to note that the investigation of faunal material supplies only a partial picture of foodways and diet. Cleland (1970), who investigated the diet of the English and French at Fort Michilimackinac with Native Americans from the Late Woodland period, noted that while "calculations based on pounds of meat may be the most meaningful for discussion of the overall subsistence system, such figures are subject to misinterpretation" (Cleland 1970:14). He stressed the fact that these calculations do not show the importance of plant foods, which constituted a major portion of the diet during these occupations. Because of the importance of both meat and plant food in a group's subsistence system, it would be ideal if both faunal and macrobotanical analyses were conducted for every assemblage and site.

This discussion has presented a number of the problems encountered in faunal analysis because of the nature of bones, and the varying methodologies utilized in archaeology in general. Once the bones have been excavated and identified, there is still the hurdle of presenting these data to be comparatively and statistically viable. Various methods have been propounded, each with their own merits and deficiencies.
The NISP (Number of Individual Specimens), or fragment count, is the most basic level of faunal analysis, as each individual bone is counted as one, and attributed to a size group, family, or species. This method, however, does not indicate the proportional importance of animals in the diet. For example, in one assemblage there may be fifty fish bones, the result of one fish, and fifty pig bones which at one time represented ten pigs. The NISP method treats each bone as a unit, without regard to other bones in the assemblage. The NISP can represent the maximum number of individuals, contrasted by the Minimum Number of Individuals (MNI).

The MNI method is utilized to more accurately depict the number of animals present. This is most often accomplished by looking at the most frequently occurring element within a species, and determining through the presence of left and right elements, age at time of death (bone fusion), and the size of the bones, what the absolute minimum number of individuals is represented. A more accurate method of determining the minimum number of individuals would incorporate the characteristics of all the bones of one species.

While the majority of zooarchaeologists utilize MNI in some manner, there are problems which cause discussion and debate. Grayson (1978) notes that the size of the faunal assemblage can greatly cause fluctuating results when the MNI method is utilized. In a later article, he reiterates that
smaller samples will produce smaller numbers of species, while the abundance of rarer taxa will be exaggerated (Grayson 1984, Payne 1972 in Grayson 1984). In addition, Grayson notes the aggregation method of faunal assemblages and sub-assemblages can cause varying numbers of MNI. He exemplifies this point with the concepts of the minimum distinction approach and the maximum distinction approach. In the former, all the bone from one site is analyzed as one assemblage. With the maximum distinction approach, the faunal assemblage is divided by horizontal and vertical distinctions, greatly increasing the MNI's overall. Grayson believes that this approach intensifies the exaggeration of MNI which occurs with smaller samples (Grayson 1984). Katherine Cruz-Uribe agrees with Grayson in that sample size is the most important factor in faunal analyses, but has determined that most negative correlation is removed when assemblages with a MNI of twenty-five or more, are used. She advocates the use of MNI, as it is relatively unaffected by differential fragmentation between species and samples. Furthermore, she suggests that Grayson's problems with differential bone fragmentation might be increased because of the use of NISP's (Cruz-Uribe 1988).

Despite some problems, the MNI method is used to indicate the number of animals represented from a site. These resulting numbers, however, do not indicate how much each animal or species contributed to the diet, as one cow MNI is equal to one turkey MNI. To turn MNI's into meaningful
numbers relating to diet, each animal MNI is multiplied by an average meat weight. Thus, one adult cow MNI represents 400 lb., and one turkey MNI is equal to 7.5 lbs. of potential meat protein (Miller 1984). The use of meat weights can be viewed as a way to equalize the biases which result from different bone frequencies and animal body weight (Bowen 1975).

White (1953) was the first to attempt the calculation of how much meat, on the average, could be extracted from different animals used by aboriginal peoples. He stressed the importance of distinguishing between the part of an animal used for food, and portions used for tools and clothing. The resulting meat weights were considered the standard for many years, with little revision. Further research was conducted by Frances Stewart and Peter Stahl, who found that White's figures were much higher than theirs, and could be a result of his reliance on domestic animals rather than wild species (Stewart and Stahl 1977).

The size variation among animals (especially domestic species) through time is an important factor in the calculation of meat weight which was taken into account by Miller (1984). Through research into the breeds and types of animals found in the colonies, Miller was able to determine more appropriate weights for animals from the seventeenth and eighteenth-centuries (Miller 1984).

There are other methods, less often utilized by analysts, in determining the amount of meat weight. Meat weight can be
determined utilizing the actual weight of analyzed bone, using either allometric or simple conversions. The allometric principle employs the amount of skeletal mass and dimensions, and an increase in size will result in an increase in body mass. Those who prefer this method, believe that the reliance on the actual bones removes the subjectivity of MNI, with its problems with differing sample sizes and computation technique (Lyman 1979). This method, however, is not without its problems, as bone weight is affected by mineralization and preservation (Lyman 1979). In addition, modern animals are used as prototypes, and thus the numbers would not be appropriate for historic investigation (Miller 1984:214).

The problem of differential utilization is addressed by analysts concerned with the how much available animal meat is represented by faunal remains. The concept of butchery units is proposed as a method to better evaluate the amount of meat each species contributed to a group's diet (Binford 1978, Lyman 1979). This method looks not so much at individual bones, but at sections of an animal. This involves understanding what a "butchery unit" is to each group under investigation, and determining what cuts were used. While differential utilization is a problem, Miller feels that the system of plantation slaughter and use eliminates this problem, as usually the whole animal was used (Miller 1984:216). The subject of determining meat weight from faunal assemblages is intricate, and the different methods all have
their own advantages and drawbacks.

Many of the problems facing zooarchaeologists have been presented, and may seem to render the study of faunal material quite futile. But while the problems inherent with faunal material must be identified and taken into account, the use of archaeological faunal data is an important resource which can greatly aid in the interpretation of sites. Faunal data is only strengthened when utilized in conjunction with other disciplines such as history and ethnography, and other studies, including ceramic and botanical analyses. Continued emphasis and study of faunal material will serve to create a larger data base, which can be utilized to refine methodology and interpretation, and provide insight into foodways and culture.
CHAPTER V

FAUNAL DATA FROM FORTY-FIVE CHESAPEAKE SITES

A major focus of this research was to discern the differential use of various food resources to obtain insight into colonial Chesapeake culture. Archaeological faunal material can effectively be used toward this objective, as it provides the remnants of numerous colonial meals. The analysis of faunal material can yield information about, most importantly, the number and types of wild species, the number of exotic species, and allows comparison of wild versus domestic food represented in the diet. Faunal data from an archaeological assemblage is often presented with information pertaining to the NISP, MNI, meat weight, and biomass. There are a number of ways in which this faunal data can be utilized to answer specific questions, by using one, or a combination, of these methods.

One avenue of investigation is concerned with the number of food species present at different times. This information could suggest a changing preference for animals or type of food, or whether a variety of food animals were preferred over a reliance on a few species, or possibly indicate a shift in
hunting practices.

The question relating to the increasing reliance on fewer numbers of species through time emphasizes the presence or absence of specific species. The MNI method was considered the best way to present this information for several reasons. The amount of meat contributed by each species was not an issue, as many of the rarer species did not contribute greatly to the overall diet, but their presence alone suggests their utilization. The use of meat weight data for this question would present extraneous information. Conversely, the utilization of NISP information alone would not even provide basic information such as how many individuals were represented by the bones. The MNI data provided the information needed to count how many individuals of each species were present. Because the investigation into the number and types of exotic species present through time was comparable to this inquiry, the MNI method was similarly utilized.

The concept of diversity is also concerned with the number of and type of species present at archaeological sites. Diversity allows the number of taxa, or richness, and the relative frequency of each taxa, or evenness, to be viewed as distinct entities, both of which are statistically testable. The concept of richness was considered pertinent, as a greater richness indices (larger number of taxa) would indicate a greater use of wild foods, since the number of domestic
species on Chesapeake sites is relatively limited and constant. The two variables used to indicate richness were the number of species found in each assemblage and the NISP. The NISP is commonly the basis for statistical analyses of diversity (Grayson 1984), and was adopted for this analysis.

The final focus of research addresses the issue of the amount of food contributed by wild and domestic species. Changes in the use of wild or domestic foods suggest an alteration in food preference or reliance which could indicate subtle shifting social trends. The inquiry into how much food was contributed by each of wild and domestic species intimates the use of meat weight. For this analysis, the meat weight was the method which could best translate the presence of animal bones into a species overall contribution to the diet.

It was vitally important not only to know the questions to be asked of the faunal data, and by what method could get these results, but it was critical that all the data utilized were comparable. Choices had to be made concerning which assemblages could be included into the data base. While a large number of faunal assemblages from the Chesapeake have been analyzed, it was necessary to set limitations by incorporating only those assemblages large enough that the bias of small sample size could be overcome. The criteria of a minimum of twenty-five MNI was established, based on Katherine Cruz-Uribe's (1988) investigation of faunal
assemblages from South Africa. She subjected various assemblages to statistical analyses, and found that only assemblages with an MNI of twenty-five or greater provided comparable results.

The resulting data base, which consisted of forty-five unique assemblages, were analyzed by a number of different zooarchaeologists. Not surprisingly, these analyses contained slight differences in methodologies and in presentation of results which had to altered to obtain a consistent data base. Therefore, it was necessary to manipulate the raw data so all the sites could be compared with valid results. Many categories included in the faunal analyses had to be altered, more clearly defined, or removed entirely; the following outlines how the faunal assemblages were manipulated for uniformity of results.

All unidentifiable bones and bone which could only be attributed to a category of large, medium, or small mammals or birds, were excluded from analysis. Therefore, the NISP's do not include bones from these general categories. Further, as a major focus of this study was to investigate diet, commensal species, and those animals not considered as food items were also removed, including dogs, cats, toads, mice, rats, snakes, horses, foxes, some turtles, birds of prey, and some small perching birds. Although some of these species were documented as food only during times of starvation, as in 1609 when colonists ate dogs, cats, rats, snakes, toadstools, and
horse hides (Simoons 1961, Tyler 1907), generally they were not consumed. Mud and musk turtles were also eliminated since they have an unpleasant, musky flavor (Ernst and Barbour 1972) and historic diaries did not list them among a wide range of food items. Although gar (fish) was considered by historic sources as inedible (Beverley 1968, Brickell 1968), there is other strong evidence that suggests gar was used as a food item (Davis 1986). It has therefore been included with the dietary estimates. The removal of other species from the list of diet items was based in part on modern American aversions, in conjunction with the absence of references to these species as food items in historic documents. While almost any of these animals could have been a meal for a hungry colonist, in general, these species were avoided.

A major focus of this research concerned itself with the differential utilization of wild and domestic species. In most cases, and with few exceptions, it is obvious to which category each species belongs. But there are those which cannot be distinguished, among which are turkeys. During the early years of settlement the majority of turkeys were most likely wild, as proclaimed in numerous travelers' accounts. Despite the change in breeding behavior, which saw the domestication of turkey increasing throughout the seventeenth and eighteenth centuries, domestic and wild continued to interbreed. However, the bones of wild and domestic species cannot be distinguished from each other. Therefore, for
consistency throughout this study, turkeys were placed within the wild food category. There are both wild and domestic species of rabbit as well. Most analysts were able to identify rabbit to one of these categories, but if not, they were placed with the wild meat estimates.

Additional intricacies are evident when certain bones are identified only to the level of family, or can be attributed to a general group but not to species. An example of this is when bones can be identified as goose or duck. While these could represent either domestic or wild bird species, it was decided to incorporate these bones in with the wild. Bones designated as goose and duck (not identified to species) are incorporated into the NISP, but are usually not incorporated into the MNI or the meat weight by the analyst. Thus, these designations have little effect on the overall dietary estimates.

A large amount of the archaeological bird bone, especially those of immature individuals, cannot be identified to species, but can be identified to the Family Phasianidae. This designation represents the pheasant family which includes turkey, chicken, and quail. Since these bones are generally the size of small young chickens, and there are few if any other members of the phasianidae family found in the assemblages, these bones were often incorporated by the analyst with chicken when determining MNI. Therefore they were included in this study with domestic species.
Among the medium sized mammals, the category of Artiodactyla (even-toed ungulates) is utilized whenever an identification to species is impossible. The sub-categories of Artiodactyla I (pig, sheep, goat, deer) and Artiodactyla II (sheep, goat, deer) both incorporate domestic and wild species. Unless noted by an analyst that the Artiodactyla category was utilized to figure MNI's of a specific species, these categories were removed from the analysis.

In order to make all the faunal assemblages comparable, it was necessary to utilize one consistent method of determining meat weight. Miller's (1984) meat weight calculations were adopted, and any assemblages using different weights were recalculated.

There are some suppositions which must be made about faunal assemblages which are intrinsic to archaeological faunal analysis. These assumptions are succinctly outlined by Miller (1984): the faunal assemblage is representative of the animals used at the site, the relative contribution of species can be determined, and the changes in subsistence patterns are a result of cultural rather than natural factors (Miller 1984:181). He notes that the first two assumptions could be invalidated by extreme variation in differential preservation or problems with bone recovery, and the third affected by major climatic shifts, or differences in ecological zones. Through statistical testing he found that none of these conditions were present which could invalidate the Chesapeake
material. With these assumptions, it is possible to analyze these assemblages to determine what they indicate about Chesapeake society.

While the focus of this study is the bones themselves, they must be viewed within the context from which they were retrieved, and the unique details of sites must be assessed. This context not only includes information on the sites' occupants, but also incorporates the sites' location, dates of occupation, types of features, and excavation and analytical methods. The most important aspects of the forty-five archaeological sites are outlined in Tables 1-4. It is important to note that there is potential for great variability among sites which would affect the type and amount of faunal remains recovered. The most prominent factors which cause variability among sites include differences in environmental location, time period, socioeconomic status, and site type (tavern, plantation, etc.).

A site's environmental location encompasses a number of elements which affect the amount and type of animal species potentially available. For example, an inland site would have lesser access to the variety of fish species enjoyed by a riverine site. There would also be differences between sites located on a freshwater or a tidal portion of a river. There is also great potential for variation between sites located in either urban or rural settings. In general, urban households would have access to market goods, while rural dwellers would
procure food through the plantation system, by raising their own animals, and hunting.

The concept of socioeconomic status denotes differential access to resources, which would present variation in the archaeological record. A wealthy plantation owner would possess the personal resources to raise domestic animals, hire hunters or fishermen, or to buy in the urban market. Slaves and poor whites would not have these numerous choices available. In addition, the wealthy were able to enjoy the luxury of a cuisine which dictated the variety, abundance, and presentation of foods. The poor and enslaved were more concerned with subsistence than the popular trends of the day.

The site type can also potentially affect the type and amount of faunal remains recovered from archaeological sites. The faunal remains from a tavern site, which offered a limited number of cuts of meat from only a few species, may differ significantly from a plantation house assemblage, representing meals for the plantation owners and their servants. An assemblage from slave quarters may also show variability from these other types of sites since a large portion of the slave househo­d remains are a result of allotted food rations supplemented by some wildlife.

While many of the factors affecting variability have been addressed in this research, others, such as the comparison of sites based on socioeconomic status, or urban versus rural location, are too complex to be included here. However, these
are topics worthy of more intensive research. Although there is the potential for a large amount of variation, it has been noted by Miller (1979 in Brown 1989), McKee (1987 in Brown 1989), and Bowen (1992) that there is a similarity of all zooarchaeological assemblages in the seventeenth and eighteenth-centuries.

The organizational framework utilized by Miller (1984) to present sites in time periods provided the foundation for this study. This organizational method places sites within forty year time periods, the first starting in 1620, and the third time period ending in 1740. An additional time period was added to this scheme, to accommodate additional sites of a later period. The Period IV time period was extended to 1792 to accommodate the third Mount Vernon assemblage which dates from 1780 to 1792. Period I (1620-1660) contained eight sites, Period II (1660-1700) had twelve sites, Period III (1700-1740) was represented by eleven sites, and Period IV (1740-1792) contained fourteen sites.

The faunal data taken from these sites were reworked, as outlined above, to make them compatible, and then analyzed in a number of ways; they were compared and contrasted by NISP, MNI, meat weight, the numbers of wild and domestic animals, and the amount and types of species. These data were manipulated in a various ways, as different methods might suggest alternate trends and conclusions.

An important facet of the investigation into the overall
meat diet is the various types and numbers of species, which reflect the variety of resources utilized. Diversity can be utilized to determine how each assemblage compares to others in terms of richness of species; a greater amount, or a more even distribution of species, will result in a higher diversity value (Rothschild 1991). The concept of richness could be easily tested by utilizing the NISP and the number of species; each site was plotted according to its NISP and number of species on a graph (Tables 16-19). Then, all the x and y coordinates for each time period were added together, and processed through a simple regression line equation: Y=bX+a. In this equation, Y is the number of taxa; X is the number of identified specimens; a is the Y intercept; and b is the slope of the relationship between X and Y (McCall 1970:92). One line, representing the mean of all the assemblages within that time period, was then plotted. The greater the slope of this line, the greater the taxonomic richness of the time period. Two sets of regression lines were plotted, one with all NISP associated with diet (Table 16), and one with all the fish and crab NISP removed (Table 17).

Table 16, which presents regression lines indicative of all the food species, portrays a steeply sloping line (Period 1), followed, in decreasing amount of richness, by the Periods IV, III, and II. The assemblages exhibit a great amount of variability, showing sites with less than 200 NISP, and
another with over 4,800.

It is important to note that these regression lines represent the median richness of archaeological sites by time period. There is the potential for a large amount of variation between sites within the same time period, which is demonstrated most clearly in Period IV, and to a lesser degree, in Period I. This great range in sites is not demonstrated to such a degree in Periods II and III. Further research may indicate whether this pattern is a result of differences in environmental location, socioeconomic status, cuisine, site type, or world view.

These regression lines suggest that Period I contained sites that were very rich in wild species, but quickly followed by a time (Period II) when there was the greatest reliance on domestic animals. After this diversity low, sites become more rich in Period III, and richer still in Period IV, but still not reaching the Period I high.

The regression lines which illustrate all the sites without the fish and crab species, show the sites more tightly packed together, exhibiting a smaller range in NISP and the number of species; sites vary between six and twenty-three species, and possess between 40 and 3150 NISP. Surprisingly, even though the abundant fish species were removed, Period IV had the greatest taxonomic richness. The regression line of Period IV can be seen to cut between the Mt. Vernon I and II phases, which have a large number of species for the small
amount of bones, and the less taxonomically rich Everard and Calvert II sites. In these regression lines, Period I and IV switched positions, while the Periods II and III remained as before. Overall, the regression lines indicate that Period I and IV show similarities of large amount of species as compared to Periods II and III which exhibit a decreased richness.

A trend similar to that which was evident in the richness regression lines is noted by reviewing the list of wild species encountered in all four time periods (Tables 10-11, 13-15). Periods I and IV contain the largest numbers of wild bird and mammal, fish, and turtle species, while Periods II and III possess consistently fewer numbers of wild species. Only two mammal species are unique to period I; beaver and woodchuck, while river otter, muskrat, and mink are only found in Period IV. One bear was found in each of Periods III and IV. Most of the remaining mammal species are found in all time periods. While deer is found throughout the entire period of study, there is a general decrease through time, going from a high of thirty-one in Period I, and decreasing to twelve MNI in Period IV. Taking into account the very large assemblage size of Period IV, this constitutes a severe drop in the amount of deer.

The investigation of species can be used to perceive any changes in the amount of exotic animals such as swans, cranes, great blue heron, green turtle, peacocks, cormorants, and
porpoises, among others. Many of these animals were commonly found on medieval tables, but are not thought of as food items today. Tables 10-14 list the total MNI of each species found within each of Periods I-IV, and indicate that the cormorant and white crane are present only in Period I, while the great blue heron and whistling swan are found in three of the four periods (Table 10A). Turtles are found present in all four periods. The two species that might be considered most "exotic" are the Loggerhead, and the Diamondback which are found in Period II, and Periods I and II, respectively (Table 13). The amount of exotic species present within all the assemblages was limited, so it is difficult to make explicit interpretations. However, there was not a total abandonment of exotic species, as they were encountered throughout the four time periods.

Because a vital point of inquiry concerned the change in the role played by wild and domestic species, each site was broken down to the simple figures of percentage of wild meat versus percentage of domestic meat. The results (Tables 5-8) clearly show a moderate to heavy use of wild foods in the early years (Period I). During this time, half the sites range between ten to twenty per cent wild, and the remaining four sites ranged between thirty-five to forty per cent wild. There is a sharp drop in the use of wild foods during the next 80 years (Periods II and III). Seventeen of the sites contain less than ten per cent wild, and six of them range between ten
to fifteen per cent wild. One might expect the trend of decreasing wild meat weight to continue into Period IV. However, the data indicates that while eight of the sites contain less than seven per cent wild, three sites contain fourteen to fifteen percent wild, and the last three range between twenty-four and thirty-one percent wild. While this appears to represent a genuine trend, Period IV contains four sites which comprise a large portion of the overall assemblage, and have high percentages of wild species.

The three Mount Vernon (I, II, III) sites and the Calvert II sites stood out among the other Period IV site assemblages because of their large assemblage sizes. In total, they comprise 10,680 of 22,486 NISP; or 47% of the Period IV NISP total. They comprised a substantial amount of the wild species, contributing eight of the twenty-two wild bird species (Tables 10A & 10B), and seventeen of the forty fish species (Tables 11A & 11B). It was feared that these few unique sites were possibly causing an inflated count of wild species in Period IV, therefore skewing the results.

These four sites comprised 47% of the total Period IV assemblage. If broken down into general categories, these four sites make up 54% of wild bird MNI, 43% of the wild mammal MNI, and 76% of the fish MNI. Overall, the percentages of wild birds and mammals contributed from the Mt. Vernon (I, II, III) and Calvert II sites appear consistent with the assemblage sizes. However, these sites appear to contribute
an excessive amount of the fish MNI to the Period IV total.

To determine whether the large amount of fish contributed by a few sites caused deceptive results, regression lines were calculated for each time period with fish and without fish. Mount Vernon sites do have a greater richness than the mean of Period IV, while Calvert II falls below the mean (Tables 16 & 17).

General categories of wild and domestic birds and mammals, fish, turtle, and crab were established, and the MNI percentage compared between Periods I, II, III, and IV (Table 9). The results indicate that Periods I and IV are relatively equal (10%) in the amount of wild bird they contain. The largest percentage of wild mammal is evident in Period I, followed closely by Periods II, III, and IV. The largest amount of fish (47%) is found in the Period IV assemblage. Period III dominates in the amount of domestic mammals (59%) and domestic birds (15%). These comparisons indicate that the greatest reliance on wild foods occurred in Periods I and IV, and adherence to a diet rich in domestic species was adhered to in Periods II and III. These indications closely parallel the general trend as suggested in the comparison of meat weights.

The total number of wild and domestic species encountered in Periods I-IV is summarized in Table 15. The largest number of wild bird, wild mammal, and fish species are found in the Period IV assemblage. Period I contains a lesser amount of
wild bird, wild mammal, and fish species, but leads in the number of turtle species. While Period IV surpasses even Period I in the number of wild animal species, the same general trend is evident here as suggested by the MNI and meat weights.

A large amount of information is available through the investigation of faunal analyses. By comparing and contrasting meat weight and MNI figures, the number and types of species, and investigating the concept of diversity and richness, an unexpected trend is presented. There was a decided reliance on wild foods during the first years of the Virginia colonies. This use of wild foods decreased throughout the seventeenth and early eighteenth-centuries. But wild foods again came into favor in the later eighteenth-century. This phenomenon is readily apparent in the bones of the archaeological sites, and mirrors a cultural shift which is suggested in the historic documentation.
### ARCHAEOLOGICAL SITES - GENERAL INFORMATION

#### TIME PERIOD I 1620-1660

<table>
<thead>
<tr>
<th>SITE</th>
<th>TIME PERIOD</th>
<th>LOCATION</th>
<th>SITE TYPE</th>
<th>FEATURES</th>
<th>EXC/ANALYST</th>
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<td>PRIVY &amp; BORROW PIT</td>
<td>SMCC/MILLER</td>
</tr>
<tr>
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<td>DITCH BELOW FORT</td>
<td>SMCC/MILLER</td>
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<td>1618-1624</td>
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<td>VRCA/MILLER</td>
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<td>1625-1650</td>
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<td>TRASH PITS</td>
<td>VRCA</td>
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</tr>
<tr>
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<td>JAMES RIVER</td>
<td>STATE HOUSE ?</td>
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Tables 1-4 from Miller 1984  
SMCC = St. Marys City Commission  
Exc/analyst = Excavator/Analyst  
Table 1
### ARCHAEOLOGICAL SITES - GENERAL INFORMATION

**TIME PERIOD II 1660-1700**

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*VRCA = Virginia Research Center for Archaeology  Exc/analyst = Excavator/Analyst*
### ARCHAEOLOGICAL SITES - GENERAL INFORMATION

**TIME PERIOD III 1700-1740**

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<td>PIER AND CHIMNEY PIER SUPPORTS, SHEET REFUSE</td>
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DAR = Dept. of Archaeological Research, Colonial Williamsburg Foundation  
Exc* = Excavator  
Table 3
### ARCHAEOLOGICAL SITES - GENERAL INFORMATION

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Exc/analyst=Excavator/Analyst  * = Bowen/Atkins

**Table 4**
PERCENTAGE OF WILD VERSUS DOMESTIC - PERIOD I
BY MEAT WEIGHT

Table 5
PERCENTAGE OF WILD VERSUS DOMESTIC - PERIOD II

BY MEAT WEIGHT

Table 6
PERCENTAGE OF WILD VERSUS DOMESTIC - PERIOD III
BY MEAT WEIGHT

Table 7
PERCENTAGE OF MNI ENCOUNTERED WITHIN PERIODS I - IV
BY GENERAL CATEGORY

Period I MNI = 498; Period II MNI = 763; Period III MNI = 454; Period IV MNI = 1,245

Table 9
### WILD BIRD SPECIES - PERIODS I - IV

**BY MNI**

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#s in ( ) = MNI contributed by Calvert II and Mt. Vernon I-III, X = All MNI from these 4 sites

Table 10a
## WILD BIRD SPECIES (DUCKS) - PERIODS I - IV

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<th>PERIOD IV</th>
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<tbody>
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#s in ( ) = MNI contributed by Calvert II and Mt. Vernon I-III, X = All MNI from these 4 sites

Table 10b
FISH SPECIES - PERIODS I - IV

BY MNI

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<th>PERIOD IV</th>
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#s in ( ) = MNI contributed by Calvert II & Mt. Vernon I-III, X= All MNI from these 4 sites

Table 11a
# FISH SPECIES - PERIODS I - IV

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<th>PERIOD IV</th>
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#s in () = MNI contributed by Calvert II & Mt. Vernon I-III, S= All MNI from these 4 sites

Table 11b
DOMESTIC SPECIES - PERIODS I - IV
BY MNI

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Table 12
TURTLE SPECIES AND CRUSTACEANS - PERIODS I-IV

BY MNI

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#s in ( ) = MNI contributed by Calvert II and Mt. Vernon I-III, X = All MNI from these 4 sites

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#s in ( ) = MNI contributed by Calvert II & Mt. Vernon I-III,  X = All MNI from these 4 sites

Table 14
TOTAL NUMBER OF SPECIES ENCOUNTERED IN PERIODS I - IV
BY GENERAL CATEGORY

Period I NISP = 7099; Period II NISP = 11,344; Period III NISP = 6920; Period IV NISP = 22,486

Table 15
Regression Lines by Time Period - Showing Relationship Between Number of Species and NISP (without Commensal, Fish and Crab Species)
## KEY TO REGRESSION LINES

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Table 19
CHAPTER VI

RESULTS AND CONCLUSION

With little exaggeration, the period of this study which began with the first permanent English colony, and extended to the initial days of nationhood over 160 years later, was a time of great physical hardship and social turbulence. The Chesapeake was wrought with immense change that can be noted in all aspects of life. The landscape, which once possessed great forests interrupted by only a few clearings for habitation and crops, was in the late eighteenth-century composed predominantly of cleared land, abounding with dwellings, especially along the numerous waterways. The land's population had changed from a majority of Native Americans to a predominance of native born whites and their black slaves. The social world was replete with a rigid hierarchy, whose adherents concentrated on acquisition of power, prestige, and material goods. Not only had the physical, social, and economic spheres of life changed dramatically, the mindset of the people, their beliefs and perceptions about themselves, and the world around them were greatly altered.
Many of peoples' perceptions exhibited in the early seventeenth-century were replaced by nearly diametric attitudes in the late eighteenth-century. In the early years, the wilderness, and the Indians who occupied it, were feared. The colonists reacted to their anxiety by conquering the Indian, and by transferring natural resources into raw materials and profit. As the majority of land and resources entered into the hands of the English, and as the Native Americans wielded less influence because of their decreased numbers due to war and disease, the English attitude toward the Indian softened. By the end of the eighteenth-century, the wilderness and Indians became ideals which were presented as part of a now lost innocence.

Hunting for wild foods was an activity whose importance shifted through time. In the early years of colonization, hunting was undertaken predominantly out of survival. By the late 18th century, fox and deer hunting was a highly structured pastime for the landed gentry. While these generalizations may be made, hunting should not be viewed strictly as an activity of need in the 1620s and a sport in the 1780s. Throughout the seventeenth and eighteenth-centuries, the activity of hunting was never totally disassociated from royalty and the gentry. At the same time, hunting acquired the aspect of being an integral part of the American frontier. The accessibility of wildlife, and the preference for wild foods made hunting a pastime sought by a
variety of people.

The investigation of historical documents and archaeological data offer insights into the utilization of wild species. Historic sources offer a vast body of material which indicate the names of species, and the types of animals present and absent from different regions. Unfortunately, much of this information is ambiguous, with some documents exhorting the abundance of wild animals, while others lament the disappearance of many of the same species. Overall, the diaries and accounts all indicate a diminishing of wild food resources through time.

The archaeological faunal record suggests a decrease in the use of wild animals throughout the seventeenth-century to the early to mid-eighteenth-century. After 1740 there was an unexpected increase in the use of wild foods. According to historic sources, deer is one of the species which became increasingly scarce in the eighteenth-century. This is also suggested by the small percentage of deer in the Period IV faunal assemblages. The presence of deer, however, indicates that wild animals were still present and available for those hunters with enough time or patience. These wild animals could have been hunted by a variety of people: a hired hunter, a slave whose job was to hunt for the plantation, a plantation owner shooting with other gentry, or by a tenant supplementing other resources.

Culinary history suggests a trait of seventeenth and
eighteenth-century dining was an increased reliance on domestic meats, a departure from the use of more unusual animals which would have been fancifully displayed in the sixteenth century. The diaries of Chesapeake Virginians, who had an exuberant devotion to many domestic meats, support this idea. There are references which indicate that some of the less common animals were considered delicacies. Because there were only a few representatives of "exotic" animals found within these forty-five faunal assemblages, it is difficult to state that there was a definitive decrease. However, many of the exotic species found in Period I were also found in other assemblages. The trend of decreasing use of exotic species may well have been operating in eighteenth century Virginia, as is suggested by the historic documents. The presence of exotic animals in the later period suggests that no clear boundary can delineate the use and disuse of exotic animals.

Based on the historic documentation, which suggests a reliance on domestic foods, the richness of the assemblages was expected to diminish. The faunal data indicated that not only did the richness increase, but in some aspects, the later period (IV) surpassed the earliest period (I). The results, which indicate that Periods I and IV are more similar than either of them are to Periods II or III, was unexpected.

An initial premise of this study was that the decrease of wild species in the diet of colonial Virginians would indicate changing social perceptions about the people, their food, and
environment which should be explainable within an historical framework. How the people viewed themselves within their environment is indicated not only by historic records, but is also strongly paralleled by the archaeological faunal data (as indicated by regression lines denoting richness). During the initial period of settlement, a large amount of wild foods were used because they were much more prevalent than the few domestic animals brought by boat from England. Wild foods were highly sought after because of their taste, and their inaccessibility in England. Despite this, their intense utilization drops rapidly after the first few years of the establishment of the Jamestown Colony. This phenomenon can be attributed to a number of factors, including the increased import of domestic animals, the quick adaptation of the domestic animals to the woods of Virginia, and the danger hunting posed after the Uprising of 1622.

On another level, the wild animals were closely associated with the dark wilderness and the savage natives who inhabited it. By relying on domestic animals, the colonists were reverting to a way of life they knew in England; a civilized way of life which they were attempting to emulate. Through the use of domestic animals, and by ignoring the wild species, the people could almost refute that they were situated in the middle of an untamed wilderness.

As the Virginians entered into the eighteenth century, they were more confident about their place in the landscape,
which now had cleared fields bordered by fences, houses, outbuildings, and roads. As with the Indians, who no longer were a threat to the survival of the English, a more relaxed attitude was taken towards the now tamed forests. The colonists could safely venture out into the woods to hunt for wild game. The faunal data supports this theory, as it shows an increase in the richness of Period III assemblages. It appears, then, that there was an increased appreciation by the people for all the riches of the land.

In Period IV, richness continues to increase from that of Period III, and even surpasses that of Period I. This data indicates a vigorous utilization of a variety of wild fauna, and suggests a parallel with the noted late eighteenth-century social tendency to glorify the wilderness. The act of hunting and eating wild game was the means by which people were able to participate in the wilderness spirit.

The colonists who first came to the wilderness of Virginia were faced with a hostile environment. Not only did they have to overcome many physical obstacles, but they had to find a way in which to make their new surroundings fit within their mental framework. The wilderness could not be readily interpreted by the colonists as a civilized place in which they could live and raise children. They looked at the wilderness, envisioned it cleared of forests and populated with people, houses, and domestic animals, and then proceeded to make it a reality.
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<td><em>Vertebrate Fauna from 18th Century Annapolis. The Calvert House Site</em>. Department of Anthropology, University of Georgia. Athens, GA.</td>
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