

# NATIVE AMERICAN FOODWAYS IN PENNSYLVANIA



Because the Keystone State possesses a long and proud history of foodways, the Pennsylvania Historical and

Museum Commission (PHMC), the commonwealth's official history agency, has adopted "The Land of Penn and Plenty: Bringing History to the Table" as its annual theme for 2012. Since its founding by William Penn, Pennsylvania has been a leader in agriculture and food processing. Its culinary landscape has been (and continues to be) enriched by ethnic groups whose traditions and tastes flavor our culinary experiences. PHMC invites you to sample and share our rich Pennsylvania produce and locally made foodstuffs and savor a taste of home.

## Preserving Archaeology

Archaeology enhances and enriches all our lives, but prehistoric and historic sites are non-renewable resources. Unfortunately, sites are ruined daily due to development and urban sprawl. When a site is destroyed, information about the past is lost forever. Because unrecorded archaeological sites are those most often destroyed, every effort must be made to locate, evaluate and record their content for the future, before a development project is undertaken. If you know of locations where artifacts have been found and wish to assist with the preservation of archaeological sites, we encourage you to record these locations with the Pennsylvania Archaeological Site Survey (PASS).

We also encourage you to donate your collections. These artifacts represent our connection to the past and should be preserved. Information, recording forms, instructions and additional resources about Pennsylvania archaeology can be obtained at

- [www.paarchaeology.state.pa.us](http://www.paarchaeology.state.pa.us)
- [www.pennsylvaniaarchaeology.com](http://www.pennsylvaniaarchaeology.com)
- <http://twipa.blogspot.com>



PHOTO BY DON GILES

Adjacent to the Pennsylvania State Capitol in Harrisburg, The State Museum of Pennsylvania offers expansive collections interpreting the state's fascinating heritage. With exhibits examining the dawn of geologic time, the Native American experience, the colonial and Revolutionary eras, a pivotal American Civil War

battleground and the Commonwealth's vast industrial age, The State Museum demonstrates that Pennsylvania's story is America's story.

### The Commonwealth's Official Museum

MUSEUM HOURS Wednesday through Saturday  
9 a.m.–5 p.m., Sunday noon–5 p.m. Closed major holidays.  
Hours may be subject to change.

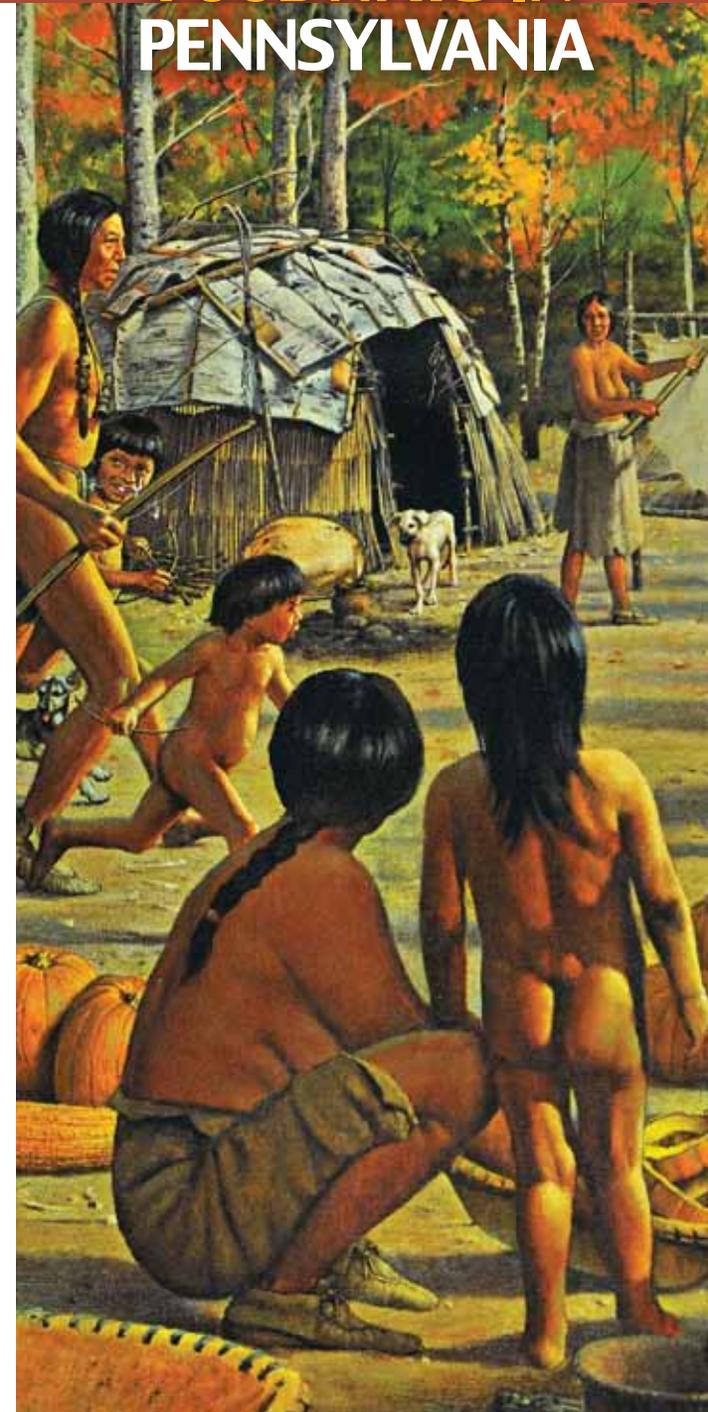
The State Museum of Pennsylvania  
300 North Street (Third St. between North and Forester Sts.)  
Harrisburg, PA 17120  
(717) 787-4980 [www.statemuseumpa.org](http://www.statemuseumpa.org)

The State Museum of Pennsylvania is one of 25 historic sites and museums on the Pennsylvania Trails of History® administered by the Pennsylvania Historical and Museum Commission.



Pennsylvania Historical & Museum Commission

Tom Corbett, Governor  
Andrew E. Masich, Chairman  
James M. Vaughan, Executive Director  
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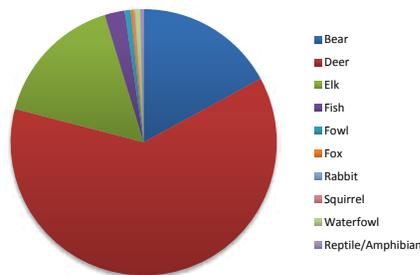
# The Development of Prehistoric Native American Foodways in Pennsylvania

## FOODWAYS = SUBSISTENCE. HOW PEOPLE ACQUIRED FOOD INCLUDING THE TOOLS THEY USED AND THE WAY THEY ORGANIZED THEIR FAMILIES TO ACCOMPLISH THE TASK.

### How do we know what people ate before there were written records?

Archaeologists have studied what Native Americans ate over the past 16,000 years by examining the remains of plants and animals recovered from archaeological sites. Animal bones are the most common type of preserved dietary information and have been the focus of many archaeological studies. By quantifying the numbers and types of remains, archaeologists can determine the percentage of different types of animals that were harvested, such as deer, turkey or fish. Unfortunately, animal bones and plant parts more than a thousand years old are rarely preserved in archaeological sites in Pennsylvania.

Pre-Gun Period  
Schultz and Washington Boro, Lancaster County (1575–1625)



Plant remains, such as seeds, nuts, corn, beans and squash are preserved when they are partially burned. These remains are frequently found in cooking hearths and trash pits but are typically small and difficult to identify. In the 1990s, archaeologists began to systematically recover this type of data using a method called flotation. During this process soils from these features are submerged with water and the charred plant remains float to the top. These are collected, dried and sent to a paleoethnobotanist for identification. As flotation became more widely utilized, archaeologists discovered Native Americans ate a wide variety of seeds, nuts, berries and roots.



THE STATE MUSEUM OF PENNSYLVANIA

Archaeologists have recently discovered there are even smaller (microscopic) pieces of evidence that shed light on prehistoric diets. Paleoethnobotanists have been able to analyze charred food remains on the inside



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of pottery or on stone tools to add to our understanding of prehistoric diets. Lipids are an organic substance found in animal fats, plant oils and beeswax that do not mix well with water and are frequently preserved. Different types of plants and to a lesser extent animals can be identified from both stone tools and, more frequently, pottery. Phytoliths are tiny plant parts made of silica that are preserved for long periods of time at archaeological sites. These microscopic remains are further evidence of the importance of plant foods that are not otherwise preserved in the archaeological record of prehistoric diets.



THE STATE MUSEUM OF PENNSYLVANIA/PHOTO BY DON GILES

Finally, archaeologists use ethnographic analogy — what types of foods do hunters and gatherers or simple horticulturists today or from the recent past use? Most hunters and gatherers living in temperate regions such as Pennsylvania collected more plant foods than foods acquired by hunting. Ironically, archaeologists generally study spear points, frequently made by men, but the majority of foods were collected by women using digging sticks that are almost never preserved in the archaeological record.



ILLUSTRATION BY JONATHAN FRAZIER

A related aspect to food and diet is health. The farming of corn became very common about a thousand years ago and allowed Native American groups to support large populations. Unfortunately, dependency on a diet of corn resulted in iron deficiency anemia, especially in children. Another consequence of a corn-dominated diet was increased tooth decay in both children and adults, often resulting in serious and sometimes fatal illnesses.

## 16,000 YEARS OF CHANGING NATIVE AMERICAN FOOD WAYS IN PENNSYLVANIA



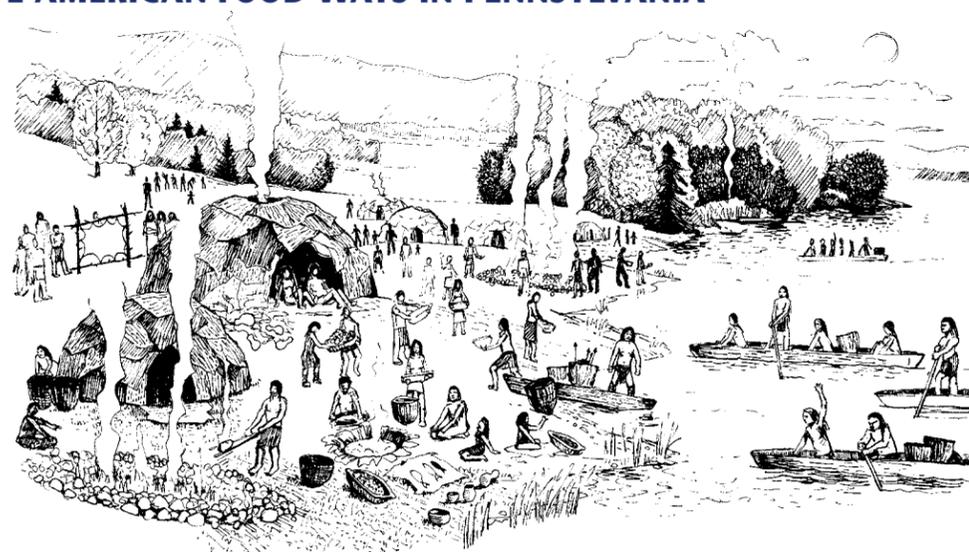
### Paleoindian Period, 16,000–10,000 years ago

When Native Americans first arrived in Pennsylvania, glaciers covered the northern part of the commonwealth. Towards the end of this period, temperatures averaged ten degrees colder than today. Vegetation was generally an open spruce forest with a few broad-leaved trees, such as oaks, along major streams and rivers. Hunting a variety of large and small game and fishing probably provided at least 60 percent of the diet. Spear points, knives and choppers for butchering animals and scrapers for cleaning hides are the most common tools. In the northern part of the state there is evidence of the hunting of migratory caribou. In the southern part of state, general foraging in the form of gathering seeds, nuts, berries, roots and fishing was more common. People generally lived in small family bands of less than four families (fifteen men, women and children). Periodically, they may have met to form larger groups when hunting caribou. Although the overall quantity of food in this environment was low, the human population was also small, allowing them their choice of foods which were the easiest to collect.



### The Archaic Period, 10,000–4,300 years ago

During this period, the climate warmed and broad-leaved trees filled the forests. A wide variety of nut-bearing trees (walnut, hickory, butternut and oaks with acorns) seed-producing grasses, edible roots and berries became available. Along with a variety of mammals (deer, beaver, bear and rabbit), birds (turkey and ducks) and fish (Atlantic sturgeon, shad and Atlantic salmon), there was a huge increase in the quantity of foods available to humans. A wide variety of tools, such as axes, adzes, the atlatl (spear thrower), grinding stones, net sinkers, harpoons and fish hooks were developed to exploit these resources. The environment was favorable and Native American bands increased in size to six or eight families (twenty-five men, women and children). The bands fluctuated in size depending on the foods being harvested. During spring fish migrations and fall nut harvests, these groups may have grown to twice this size. In winter, they broke into smaller groups to hunt deer and small game in upland camps. Towards the end of the Archaic period, there are indications that Native Americans began to focus on seed plants and may have been growing squash in small gardens to supplement their diet.



### The Transitional and Early Woodland Periods, 4,300–2,100 years ago

This began as a warm and dry period, which caused periodic food shortages. It ended as generally a warm and wet period and included the spread of chestnut trees in the Pennsylvania forest. Native American families continued to eat a wide variety of mammals, birds, fish, roots, seeds, nuts and berries. Some of these foods, such as red oak acorns and seed plants, required more work to process and this suggests that families were working harder at subsistence. Trade with other groups was common and there are indications that families were organized differently to efficiently exploit a variety of resources. Carved stone bowls were used to increase the efficiency of processing foods during the Transitional Period, an indication that Native American populations were growing beyond the carrying capacity of the environment. Band size continued to change based on seasonally available foods but the spring fishing camp may have contained ten to twelve families (more than 50 men, women and children). Clay pottery was introduced at the end of the Transitional period and suggests that families were more sedentary. In addition, it is believed that they were increasingly cultivating plants in small gardens such as squash, little barley, knotweed and lambs quarter. This was the beginning of farming in Pennsylvania and it probably significantly changed family organization.

### The Middle and Late Woodland Period, 2,100 to 400 years ago

Garden farming became common in Middle Woodland times when the focus was on seed plants that included lambs quarter, knotweed, little barley and squash. Gardens became larger and corn was added to the subsistence system. Eventually, along with beans, corn became the dominant food source and contributed up to 75 percent of the diet. A variety of other wild plants and animals were also eaten. Corn, beans and squash, “the three sisters,” became the main foods by the end of this period. Native Americans lived in villages of a hundred or more people. The type of farming they practiced is called swidden or “slash and burn” agriculture. This involved clearing the forest by burning down trees and planting crops in their ashes. They did not have fertilizers and within five years the nutrients in the soils were depleted, requiring clearing of new fields. Within fifteen years, all the fields near the village were depleted and the entire village was moved. Swidden farming required constant planning, clearing of new fields and eventually building new villages. To organize the labor force for swidden farming, Native Americans lived in tribes that were subdivided into clans formed by tracing their ancestors through male (patrilineal) relatives or through female (matrilineal) relatives.



ILLUSTRATIONS BY JONATHAN FRAZIER

### Summary

The evolution of foodways began with small populations of Paleoindian hunters and gatherers exploiting an ice age landscape. Although the quantity of foods was relatively low, human population was also low and they did not need to develop special tools or organize a labor force to support themselves. The Archaic Period represents a plentiful time and human populations quickly grew by efficiently using all available resources. People developed many new tools to maximize their collection of food from their environment. As human populations increased, they began to exhaust the foods of the temperate forest and were forced to cultivate plants. Native American social organization began to change. Humans became more sedentary and eventually focused on farming to support increasing populations. Social structure changed to a tribal organization in order to better organize the labor force necessary for swidden agriculture.

### The State Museum of Pennsylvania's Archaeology and Anthropology Gallery

Archaeologists preserve the past and educate the public about the role of archaeology in preserving our heritage. In Harrisburg, The State Museum of Pennsylvania's Archaeology and Anthropology Gallery focuses on the cultural heritage of Pennsylvanians. Visitors can explore nearly 16,000 years of human occupation, from Native American prehistory through European colonization. The museum is also the official repository for state and federal archaeological investigations and curates these collections for future generations.