

1. WHAT WE DID AND WHY WE DID IT

A series of circumstances and regulations led to this investigation and caused the investigators to examine the historical forces that have shaped Delaware.

This is a (Phase I/II/III) report of archaeological and historical survey and data recovery in Duck Creek Hundred, Kent County, Delaware. The subject property was developed as a wetland replacement in connection with State Route 1. Because the archaeology was undertaken almost without interruption between phases, this report describes all three phases of cultural resource management, from reconnaissance through data recovery. Because the intervening phased reports were not formally submitted, this document contains chapters that describe the decision-making processes along the way, while combining the customary three phases into a single narrative.

In the course of background research, it became apparent that the house site on the property could illustrate a little-understood period in the post-contact history of Kent County's Native American population.

At least two of the farm's tenants were Native Americans, and two of the owners were close personal associates of Native people. As research continued, it became obvious that the community on Pumpkin Neck included three distinct groups of people who interacted among themselves and with the other groups according to predictable patterns of behavior.

The Indian remnant population in Kent County has received very little scholarly attention, except some twentieth-century ethnographies and popular books (Weslager 1943). The colonial and post-Revolutionary history of these people remains largely unwritten and unknown, even within the community. Context development required new community research, built upon the authors' previous reports in this series (Heite 1993; Heite and Blume 1992; Heite and Heite 1985; Heite 1984).

The project was located on about a hundred acres of agricultural land, mostly poorly-drained Othello soils, south of Route 6 (Woodland Beach Road) on the head of Hawkey, or Hirons, Branch. The Delaware Department of Transportation proposed to lower grades and erect earthen structures to convert much of the property into wetlands.

Because wetland replacement is a federal undertaking, the project is subject to Section 106 of the National Historic Preservation Act. In order to meet its obligations under the Act, the Department engaged Heite Consulting of Camden, Delaware, to conduct cultural resource investigations.

Phase I fieldwork was accomplished primarily during July of 1994 by Edward Heite, assisted by Jason Brown. Phase II fieldwork began in September 1994, with the assistance of George Keeler and Aaron Jones. Phase III fieldwork was conducted beginning in January 1995 with the assistance of Aaron Jones, Kimberly Dugan, Travis Hale, George Keeler, Steven Vicuna, Gerald Layne, William Sandy, Lyle Browning, Jeffrey Harbeson and Louise Heite. Artifact analysis through all three phases was under the direction of Dr. Cara Lee Blume. Fieldwork concluded August 11, 1995, and the site was destroyed immediately thereafter.

LEVEL AND STYLE OF INQUIRY

This is a report of a Phase I reconnaissance, followed promptly by a Phase II intensive survey and then by a Phase III data recovery. Fieldwork for each phase is discussed separately, in chronological order. Analysis is combined at the end of the report, in chapters 25 and 26, beginning on page 313.



From the 1800 edition of the journal of the Duc de la Rochefoucault-Liancourt

Figure 1

(Facing page)

This federal-era map of the Middle Atlantic states illustrates the relatively wild conditions that existed in Delmarva, the only place in the region that was still identified as forest. Duck Creek, identified as a town name, is not shown as the name of a waterway.

The purpose of a Phase I survey generally is to identify all “cultural resources” that survive in the study area. It is not ordinarily a goal of Phase I survey to assess significance. If the information collected in the process of identifying sites also indicates that a site may be eligible for the National Register, it is permissible to make that evaluation.

Phase I survey is never more than a sampling exercise, designed to recover as much information as possible, within reason. Although statistically-derived models may be used to select areas to be investigated, no “scientific” survey system can wholly displace instinct, experience, and dumb luck. Strategy choices are discussed in Chapter 7.

Phase I field strategies are intended to cover as much territory as possible, cost-effectively recovering small but meaningful samples from as many locales as possible.

Preferred Phase I strategy almost always is pedestrian survey of cultivated fields. From an archaeological point of view, no sampling method can approach the effectiveness of a 100% walkover on a plowed field. Unless specific, rare, conditions exist, there is no justification to shovel-test freshly plowed fields at the Phase I level. Subsurface testing in a plowed field can be justified only if ground cover obscures the surface, or if the soil is mapped as a relatively young soil type that might have been deposited since man arrived in this area, about 12,000 years ago.

Where pedestrian survey is not possible, the investigators must devise systems that will provide coverage, in keeping with accepted professional standards, and the evaluated

likelihood of site occurrence. Fortunately, there is extensive and authoritative literature on the subject of survey techniques (King 1978).

Phase I survey for this project employed both a pedestrian examination of plowed fields and shovel tests. Walkover survey covered all the areas where models predicted a high likelihood of finding sites. Shovel tests were employed only as far as necessary to verify the presumed absence of sites on poorly-drained soils in old woodland.

The Phase II requirement is defined as whatever is necessary to determine the significance of the identified resource, in terms of the National Register criteria. Based upon locational data generated in a Phase I survey, the Phase II survey determines the extent, integrity, and significance of the resources. Methods used at the Phase II level are determined by the principal investigator in light of results from a Phase I survey.

Evaluation is a function of Phase II survey. If a Phase I survey should produce information that can be used to determine significance, integrity, or boundaries, this information is treated as an unanticipated bonus. On rare occasions, Phase I results are so conclusive that a Phase II (evaluation) study is not required. This situation occurs at opposite ends of the spectrum: when sites are obviously not eligible, or when they obviously are eligible.

A project’s principal investigator adopts Phase III data recovery strategies in order to wrest maximum data from reasonable effort and expense. Each Phase III project is different, requiring planning input from broadly varied interests, and sensitivity to the needs of other researchers.

In planning a data recovery strategy, the principal investigator must consciously attempt to transcend his or her own bias and research orientation. The investigator is expected to answer recognized research needs, but any data recovery plan must also preserve and report data that might be useful to other researchers with widely varying agendas, possibly worldwide.

THE GEOGRAPHICAL SETTING

The project area lies in the coastal plain of Delaware, near the western boundary of the coastal tide marshes. Soils belong to the Othello-Matapeake-Mattapex soil association, which is characterized by nearly level to sloping, poorly drained to well drained upland soils that have a

slowly permeable to moderately permeable subsoil, mainly of silty clay loam or silt loam (Soil Conservation Service 1971).

Poorly-drained Othello soils, the dominant type in the project vicinity, require drainage in order to be cultivated. Because it



Plate 1

Mud

Field crew during the muddy January 1995, pausing from the work of reopening the driveway into the site. Poorly-drained soils made their presence felt whenever it rained. Sticky Othello soils that cover most of the farm have rendered it unsuitable for cultivation without extensive ditching. Left to right: George Keeler, Travis Hale, Kim Dugan, and Aaron Jones

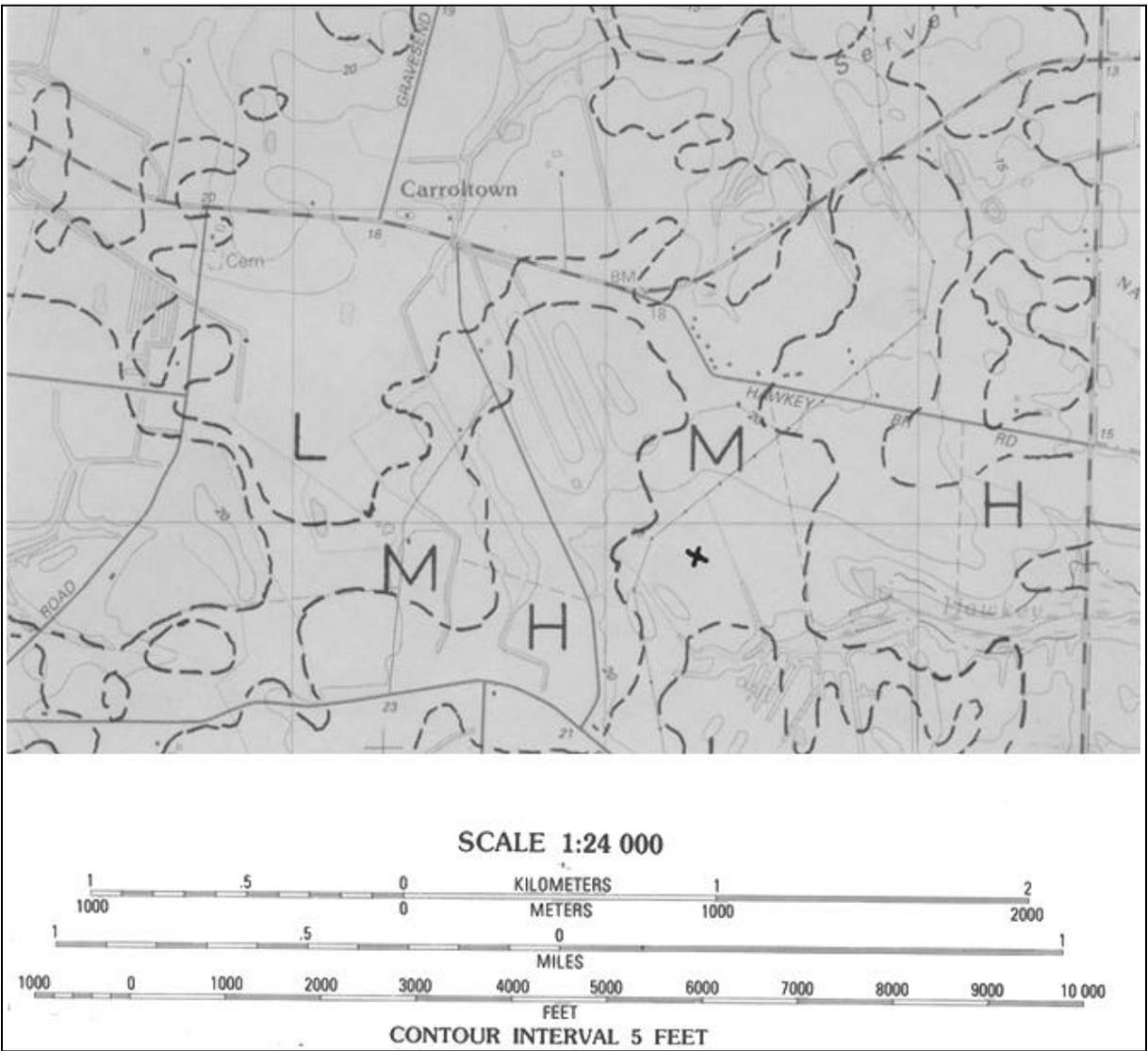


Figure 2

Location and sensitivity

Project location, from USGS Smyrna quadrangle, with prehistoric site sensitivity, as defined by Custer, superimposed. The project area is marked "x". If an area is evaluated as having a high or moderate probability of containing a site, the investigator is advised to allocate additional resources

is difficult to build a septic system in this soil, Othello is not favored for residential "strip" development along country roads. Othello soils are uniformly grey in color, indicating long-term wetness (Figure 4, page 11).

Mattapex soils, which also are present, are moderately well drained, typically consisting of brown silt loam over coarser sandy loam layers. Where these soils occur in areas with high water tables, they respond well to drainage by ditching

and tiling. Around the project vicinity, most of the older farmhouses are sited on Mattapex soils or similar types.

In the east of the project property is a small area mapped as Matapeake silt loam. These are deep, well-drained brown silty upland soils. They formed as a silty mantle over older sandy soils, and are regarded as well drained.

A very short distance to the east is Delaware's coastal marsh, a resource-rich area that the prevailing models (Custer 1986: 131, 156) favor for prehistoric base camps. These camps are expected on well-drained high ground close to salt marshes.

The vicinity is called Pumpkin Neck, or Severson Neck, which lies between Taylor Gut to the north and Hillyards Branch to the east. Hawkey, or Hiron, Branch rises near the southwest corner of the property. It flows northeast into Quarter Gut, southwest of Woodland Beach (USGS 1966:52, 91, 99).

The site is remote from Delaware's principal historic transportation arteries: Route 13 and the Delaware Rail Road lie to the west, and the navigable tributaries of Delaware Bay lie to the east and north (Figure 3, page 9). When the modern mouth of Duck Creek (now Smyrna River) was cut during the nineteenth century, the old creek silted up, shortening the water route to Smyrna, but isolating many farms of Duck Creek Hundred.

Route 9, a relatively new corridor, lies nearby, to the east. This highway, now reduced to "scenic" status, was created early in the twentieth century from a series of local roads that more or less connected along the heads of tidal necks. It was originally paved as a "nine-foot" road, with one lane concrete and the other lane gravelled. By paving half of each road, the Delaware highway agency was able to build twice the mileage of concrete for the same cost during the decade of the 1920s. Route 6, which passes along the north boundary of the property, also was a nine-foot road, from Smyrna to Woodland Beach.

The original trade artery for the area was Duck Creek (Smyrna River) and Little

Duck Creek (Leipsic River). Route 6, which forms part of the northern boundary of the site, was built to connect with a steamboat landing at Woodland Beach on Bombay Hook Island. During the later years of the nineteenth century and the early years of the present century, the project area was geographically well situated to enjoy the advantages of steamboat transportation by virtue of the road to Woodland Beach.

DELAWARE BEFORE EUROPEANS

People arrived in the Delaware Valley near the end of the most recent (Wisconsin) glaciation. Glaciers entrapped so much water that the ocean lay fifty miles east of the present Sandy Hook, New Jersey. As the glaciers retreated and the ocean advanced, the project area's ecology changed. With changes in ecology and population came changes in land use, which are reflected in the cultural record.

Mammoth, musk oxen, horses, caribou, and walrus provided food for dire wolf, short-faced bear, and other predators. Man was among the smaller competitors in the tundra food chain, but his skills compensated for his physical shortcomings. Nomadic people of this Paleo-Indian period were among the most skilled makers of stone tools in the world. They would travel great distances to quarry the best flinty cobbles or nodules from which they made exquisite spearpoints, knives, and small tools.

Paleo - Indian hunting - gathering society lasted in the coastal plain until about 6,500 BC, when the Atlantic climate episode and the Archaic culture period of prehistory began. Northern-type hardwood forests had replaced the tundra; the ocean had risen, and the climate was warmer.

Pleistocene grassland megafauna gave way to smaller game, which required different hunting techniques and tools. "Micro-band base camps" of this relatively arid period often are found on slight elevations above poorly-drained basins where game might have come to drink or feed. Even after the climate became wetter, people apparently continued to live on sand hills that formed near basins. Sandy soil appears to

have been particularly attractive as a campsite.

Archaic people fashioned tools made of quartz, a material that is more available but less tractable than the flinty cryptocrystalline silicate materials that Paleo people had favored. Ground stone axes and other heavy tools appeared during this period.

By 3,000 BC, prehistoric society was decidedly different. Because people had stopped moving around so much, regional cultural differences began to appear in the artifact assemblages.

Sedentary lifestyles ultimately led to horticulture, complex religious practices, and the accumulation of more, less portable, material goods. This last prehistoric period, the Woodland, is characterized by larger groups of people living together in villages, using pottery and other heavy or fragile goods that would have been difficult to move frequently from place to place.

Woodland people tended to concentrate in more or less permanent settlements at places with abundant multiple resources, such as sites convenient to shellfish beds on the edges of salt marshes. These settlements, called "base camps," or villages, were generally occupied by one or a few extended families. They sent out hunting and gathering parties, but they seldom dispersed whole populations to live off the land in the manner of their hunter-gatherer ancestors.

Base camps were generally located, according to the accepted models, near rich and diverse resource areas, such as the edge of a salt marsh. While very large sites from the Woodland periods have been found in Delaware, most archaeologists today believe that they were seldom occupied at any one time by more than a few households. Organized villages, with palisades and ceremonial centers for large populations, are

not known to have existed here. As far as the settlers' historical records testify, the period of initial contact between the Europeans and native people was generally peaceful. There were a few abortive attempts to massacre the settlers, but most contacts appear peaceful.

PREHISTORIC CHRONOLOGY (After Custer 1986)		
<i>Dates</i>	<i>Environmental Episode</i>	<i>Cultural Period</i>
8080 BC	Late Glacial	Paleo-Indian /Early Archaic
6540 BC	Pre-Boreal/Boreal Atlantic	Middle Archaic
3110 BC	Sub-Boreal	Late Archaic
810 BC	Sub-Atlantic	Woodland I
AD 1000		Woodland II
AD 1600		Contact

During the seventeenth and eighteenth centuries the term "Indian" was applied only to native people who rejected adopting European culture. Once they had accepted Christianity and other trappings of white society, native people were no longer identified by any label except, occasionally, "mulatto."

The last "Indians" [under this definition] had left Delmarva by the middle of the eighteenth century, after the abortive uprising at Winnesocum in 1742. Those who stayed behind were generally Christians who owned land under the English system of land tenure. They apparently tried to become as European as possible in their behavior, while avoiding marriage outside their own people. They largely succeeded in obliterating most evidences of their Indian heritage. In 1790, when the new Federal government required census takers to identify everyone by race, a nightmare of racial ambiguity ensued. The census, like most legal instruments of the day, was biracial. One was either of European or African descent, however the census enumerator chose to classify them. Those Indian-descended mulattoes whose race had been ambiguous were suddenly forced by the census to be counted in one of the two categories.

EUROPEANS TAKE CHARGE

Wherever Europeans have settled, they have first built highly-organized towns on the frontier, projecting all the trappings and institutions of the mother country onto the raw wilderness. In the present Delaware, these highly-organized communities included fortified settlements at New Castle, Fort Christina, and

several locations in Sussex County.

Pioneer farmers typically follow, after the soldiers have established an outpost of civilization. The first Dutch and Swedish settlements in the Delaware Valley conformed to the frontier model: they were compact and strictly regulated, and were supported largely by supply lines that brought necessities of life from Europe or from older colonies (Heite and Heite 1986).

Pressures from European international trade and political competition probably delayed the region's transition into the second phase of colonization, which was a less regimented period of dispersed agricultural development on a relatively peaceful hinterland. Most of the other North American colonies moved to settle the countryside within a decade after initial settlement. The Delaware coastal settlements, in contrast, clustered around their fortified command posts for at least thirty years. Not until the fall of New Netherlands in 1664 was the Delaware Valley finally able to realize its potential as an open, self-sustaining, agricultural colony under a single European colonial power.

The major known centers of the settlement period, in chronological order, were:

1626: Dutch Fort Nassau on the Delaware River near Timber Creek at the present Gloucester, New Jersey and probably another poorly-documented outpost on Burlington Island upstream;

1629: A Dutch whaling station on a tract called Zwaanendael or Swandendael, on the lower bay, now in Delaware, and believed by many to be in the present vicinity of Lewes;

1638: Fort Christina, until 1643 capital of New Sweden, later the Dutch Fort Altena, now in the city of Wilmington;

1641: A colony of Englishmen from New Haven who settled at Varckens Kill, now Salem River, New Jersey;

1643: Printzhof, or New Gothenborg, on Tinicum Island, now attached to the Pennsylvania mainland, the home and

administrative capital of Swedish Governor Johan Printz;

1643: Swedish Fort Elfsborg on the Delaware River near the present site of Salem, New Jersey, in the modern state of Delaware, but on the east bank of Delaware River;

1651: Dutch Fort Casimir, at the present site of New Castle, Delaware, established to counter the Swedish power;

1659: The Dutch West India Company fort at Lewes, at a known site on the present Pilottown Road in the city of Lewes, Delaware; and, finally,

1663: Cornelis Plockhoy's Dutch Mennonite settlement, also on the Swanendael territory and probably near the present site of Lewes. This may have been the "Whorekill Town" known to have existed at the present vicinity of Midway, and may have been associated with the "Townsend Site" excavated by the Sussex Society near there.

None were large: the principal fortifications probably did not measure more than 200 feet on a side. The total settled area on the Delaware between 1626 and 1664 did not exceed a few hundred acres, concentrated in seven locations. By contrast, Virginia before 1622 had dispersed into 25 particular plantations, populated by about 1,200 people cultivating extensive farms. Jamestown, the Virginia capital, has yielded archaeological remains of at least 141 structures and major features, most from the seventeenth century.

Largest of the Delaware settlements was Fort Casimir and its adjacent village of New Amstel, which grew to contain 110 houses within eight years after its founding in 1651.

Land grants in the immediate area of the project begin with the Quaker influx that followed William Penn's takeover in 1682. The Dutch and early English settlers had largely ignored the area inland from Bombay Hook, probably because it was difficult to reach by ship.

Bombay Hook was an island, circumscribed by Duck Creek, which then ran north-south and emptied into Delaware Bay

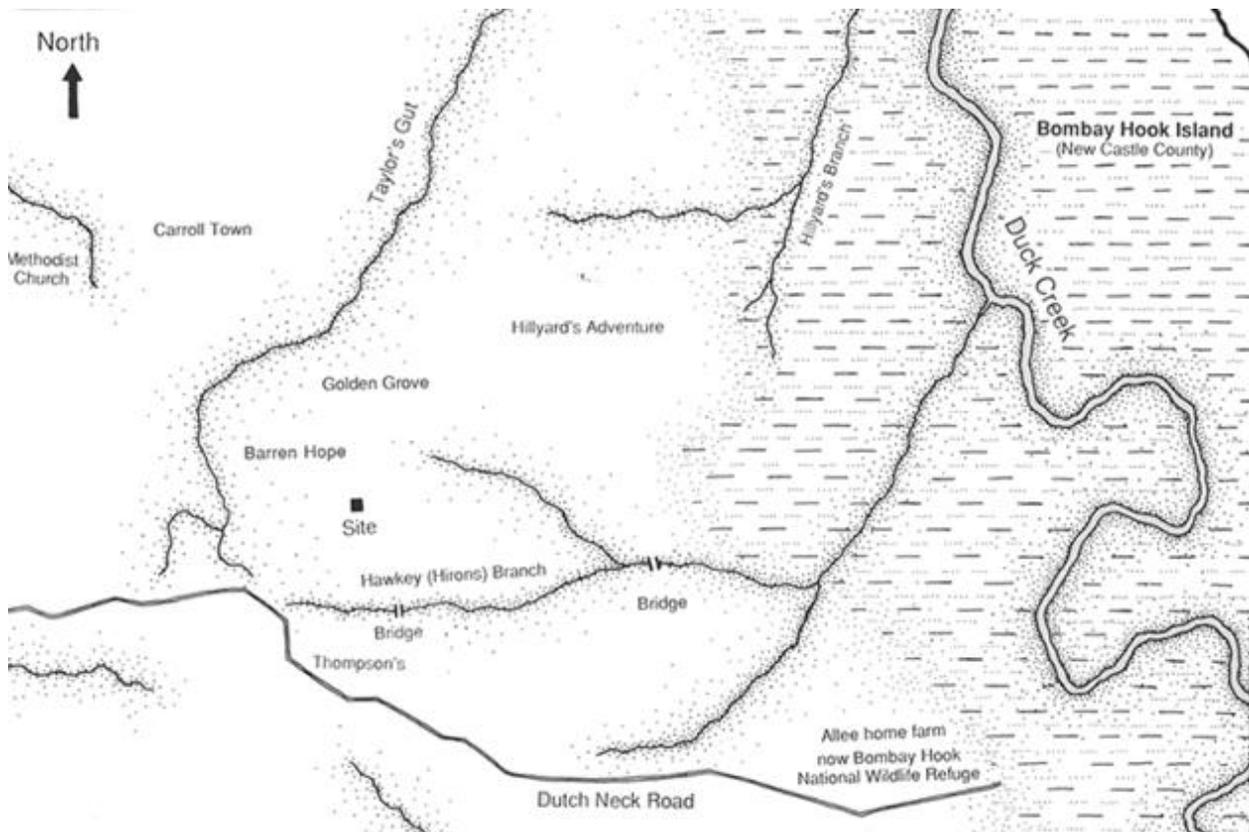
through Little Duck Creek, now Leipsic River (page 69). The present direct route to the Bay, east of Smyrna, was not opened until the end of the eighteenth century. Bombay Hook during the seventeenth century was a boundary, dividing the City of Amsterdam colony from the West India Company territory. Under the Duke of York, Bombay Hook divided the New Castle and the Whorekill court jurisdictions. Later, it became the dividing line between Kent and New Castle counties. Since Duck Creek ran north-south, it was the eastern boundary of Kent County in the vicinity of the project, and the bay shore above Leipsic was in New Castle (Figure 3, below).

Early in the eighteenth century, a commercial center developed around a mill seat at the place where the King's road crossed Duck Creek, later called Salisbury. Religious

institutions and commercial enterprises serving northern Kent County developed here.

Duck Creek Crossroads community, now Smyrna, developed a short distance south of Duck Creek at the place where Route 6 crosses the old State Road (13a) today. Smyrna is a classic example of the Delaware trading town, which developed gradually between two mill seats where the north-south highway crossed an east-west road to Maryland along a ridge (Heite and Heite 1986).

Jurisdictional problems with the Maryland proprietors complicated development in the western part of lower Delaware. Maryland created an entity called Durham (or Essex) County, with pretended jurisdiction over the present Sussex County and western Kent County. Some settlers, not sure which



Site Setting

Sketch map of the project vicinity about 1800, with some of the place names mentioned in the text. Dutch Neck Road, which connected to a landing on the Allee land, was the only formally established road in the area. Most of the tracks were mere customary traces. The map is not to scale, and north is at the top.

colony would ultimately govern their homesteads, took out patents in both the Penn and the Calvert land offices. The battle was not finally settled until 1765, when a British court decreed the present western and southern boundaries of Delaware. Substantial parts of Worcester County, Maryland, became parts of Sussex County. Kent County west of the present town of Clayton finally was affirmed as Penn property, even though substantial Maryland land grants were recognized near the boundary.

The Penn family reserved for itself a manor in northwestern Kent County, on the headwaters of Duck Creek, called Frieth. The manor lay partly in the area claimed by Maryland on the west, and partly adjacent to the large farms of Duck Creek Hundred's wealthiest landowners. These landowners encroached upon the manor's eastern side until it effectively had disappeared by the end of the proprietary era.

Some former Marylanders refused to accept Delaware jurisdiction. Most spectacular of the Revolution-era resisters was Cheyney (China) Clough, who led an armed resistance against Delaware attempts to tax his farm. Western Kent County, in the Chester and Choptank drainages, continued a Maryland commercial and social orientation even after Delaware took legal control. Clough had been a soldier in the Pennsylvania forces during the French and Indian War, and claimed that he held a British commission during the Revolution. He finally was hanged because of loss of life during his tax resistance.

During the Revolutionary War, British warships blockaded Delaware Bay and burned the wooden parts of the lighthouse on Cape Henlopen (Cullen 1956:20, 30). Farms along the bay, including some on the marshes at Bombay Hook, were attacked by marauding parties of British foragers. The Royal Navy's control of the bay was constantly challenged by small boat squadrons, which may have effectively prevented the military occupation of downstate Delaware.

During the two generations following the Revolution, Delaware farmland declined. Neglect, ignorance, and the disinterest of absentee landlords conspired to reduce the

prosperity of Delaware agricultural areas.

Delaware law required that each heir should receive a share of a decedent's farm. Small landowners were obliged to leave even smaller farms to their children, until the land could no longer support its owners. To avoid impoverishing his heirs, an ambitious farmer was obliged to pursue a lifelong career of buying and developing new farms.

Wealthy landowners, heirs of the speculative boom of the early eighteenth century, suffered a different consequence. Many were non-residents, frequently living in Philadelphia or other urban areas. Each generation divided the ancestral estates into smaller and more scattered fragments. Poor tenants in ramshackle farmsteads rendered smaller and smaller rents to distant landlords, as the heirs drew cash incomes without replenishing the productive base of their diminishing farms.

By the end of the eighteenth century, Kent County was a patchwork of rich and poor farms. A few leading resident families, notably the Denneys, Raymonds, and Allees, maintained productive manorial farms along the well-drained strip of level ground along the centers of the necks between the marshes and the headwaters of the tidal streams. These people bought the best ground and combined it into the farms they left to their children.

Less attractive land, not so marketable, remained fragmented in the hands of the heirs. Heirs of poor farmers became poorer, while the heirs of rich absentee farmers sought to unload their poor tracts. These leftovers were bought or rented largely by landless tenants whose ability to profit from farming was limited.

Early in the nineteenth century, a few educated farmers began to introduce new methods that eventually had a lasting effect on the landscape. The "book farmers" bought and consolidated the neglected farms and introduced new agricultural technologies.

Agricultural societies during the nineteenth century introduced innovations to agriculture throughout the state. These organizations sponsored contests for



Figure 4
The Soil Context

Soils in the project area, based on SCS, 1971. More recent soil studies differ in detail.

accomplishment in silk culture, fruit growing, and other areas of interest. Budded peach trees were among the innovations introduced during this period. Nurseries, orchards, and shipping facilities flourished; peach farmers rose to dominate the agriculture scene before the Civil War.

After the Civil War, Delaware agriculture turned to canning, and enjoyed a new wave of prosperity. Canneries appeared all over the state, and tomatoes became Delaware's dominant product (Heite 1990).

When the Delaware Rail Road opened in 1856, Delaware producers gained access to national markets. Toward the coast, a growing number of steamboat companies served communities that were not along the railroad. Woodland Beach, on Bombay Hook Island, was first a steamboat wharf and briefly a railroad terminus. By the end of the nineteenth century, roads had been reduced to feeder status, and the railroads and steamboats dominated long-distance travel.

The great period of steamboat transportation in Delaware occurred during the

last two or three decades of the nineteenth century, after railroads had opened the interior of the United States. Local railroads were unable to reach the long, marshy necks of eastern Delaware, but railroads from Philadelphia generated a nationwide demand for produce from these rich areas. Coastwise steamers fulfilled this need, connecting coastal Delaware to Philadelphia as never before.

Until the advent of the automobile, there was no need for road transportation beyond the nearest railroad station or steamboat wharf.

A VISIONARY TAKES CHARGE

Coleman DuPont, whose father had operated a trolley company, understood the potential importance of transportation to the future development of lower Delaware. Although he was a member of the triumvirate that ruled Delaware's premier upstate industrial firm, DuPont was a man of broad statewide interests.

He proposed to build, at his own expense, an intermodal transportation system

that would include a four-lane divided highway, electric railway tracks, and an outer shoulder for bicycles and horse drawn vehicles. Each downstate town would be bypassed, since the highway was envisioned as a through road from Wilmington to Selbyville.

This visionary plan was reduced in the real world by politics and local opposition. Four lanes were reduced to two. The light rail system was eliminated, and bypasses were abandoned. The new road was built through a few new rights-of-way, but it always provided for a parade of potential customers to drive, and potentially to stop and to shop, as they passed through each small town. Eventually the towns tired of entertaining a constant slow-moving parade of through traffic, and the state began building bypasses at public expense.

In spite of predictions that the wide right-of-way never would be used, DuPont went ahead and purchased the full width in some areas. He eventually was appointed the first chairman of the new Delaware State Highway Commission that accepted his money to finish a scaled-down parkway, but his dream eventually was vindicated.

Completion of the north-south Parkway (Routes 13 and 113) in 1924 opened lower Delaware to highway traffic from upstate and points north. Motor commerce flourished, and settlements were no longer confined to a narrow band along rail and water corridors. People spread across the countryside in a disorderly suburban sprawl, but commerce coagulated predictably along the through corridors.

Along Route 13 and Route 113, a new band of businesses developed. One of the oldest of these is the Wayside Inn, in Smyrna, established on the edge of the highway soon after it was opened. Other Smyrna businesses, including automobile dealerships, followed.

The new roads also encouraged agriculture, and Sussex County farms enjoyed a period of prosperity as the chicken industry developed. North-south tourist traffic dominated the Delaware coast, while the Maryland resort of Ocean City prospered primarily as the

vacation outlet for Washington and Baltimore.

At the beginning of World War II, the DuPont Parkway had been enlarged to a four-lane road between Dover and Wilmington. Its last four-lane section, between Milford and Georgetown, has recently been built, 75 years behind its founder's visionary timetable.

Bypasses around towns finally were set in place after World War II. The first Dover bypass, in 1952, relieved the pressure on State Street and Governors Avenue. The new bypass skirted Dover's congestion, but it was not politically possible to restrict access. Smyrna and Dover transformed their bypasses into traffic-ridden commercial districts, which inevitably became congested bottlenecks along the parkway, just as the streets through town had clotted a generation earlier.

KENT COUNTY TRANSFORMED

Coastal Kent County was transformed during the middle years of the twentieth century by two events: potato farming and wildfowl refuges.

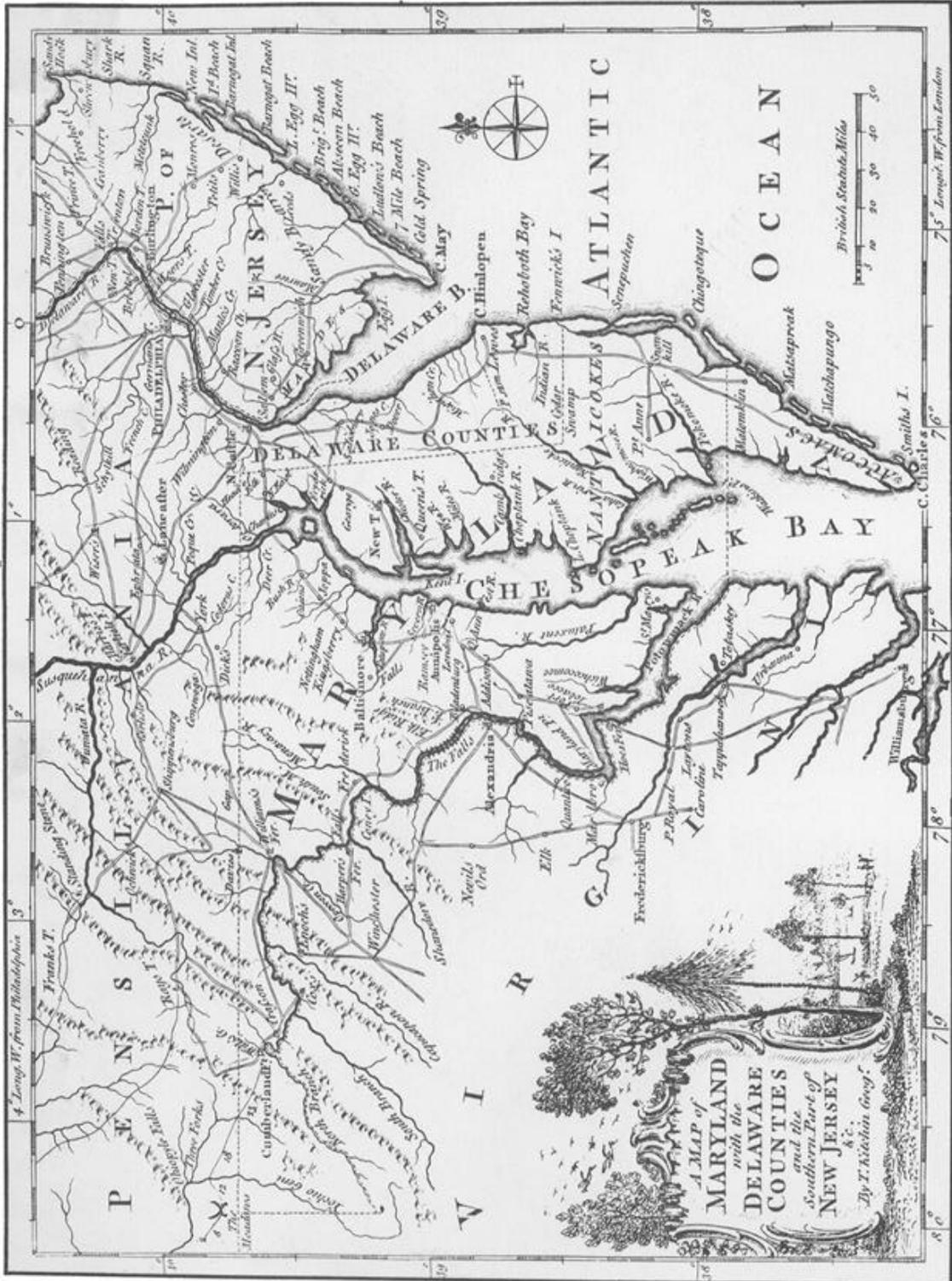
When the rich farmlands of Long Island disappeared under urban sprawl, potato farmers moved to Kent County, where growing conditions were similar. These newcomers, rich with money from booming suburban property settlements, introduced irrigation and other innovations to the broad plains of eastern Kent County.

Geese became big business with establishment of state and federal management facilities, which began during the Depression and have continued to expand to the present day.

Figure 5 (Facing Page)

After the Indians, 1757

This 1757 map shows Salisbury (now Smyrna) and the road to Head of Sassafras (now the Green Spring–VanDyke Road) westward. Bombay Hook is shown as an island. No Indian towns are shown in Delmarva or New Jersey, in contrast to earlier maps (Figures 15 and 16).



Printed for R. Baldwin in Water Street New.

Reproduced from The London Magazine or Gentleman's Monthly Intelligencer, August 1757.

Maran Printing Services
 320 North Eutaw Street Baltimore, Maryland 21201

Hunters from Pennsylvania and the northern states discovered the abundant waterfowl of the Delaware marshes; landowners around the perimeter of the wildlife refuges discovered a rich market, catering to their needs.

The marshes, which Delaware farmers had labored nearly three centuries to drain, suddenly became assets to be encouraged and expanded.

West of the potato farms and goose marshes, the Route 13 corridor overflowed with sun worshipers trekking to the beaches. As they progressed slowly through Smyrna and Dover, vacationers clogged the old built-up “bypass” sections of the highway, stalling local traffic. Industries were choked by tourist traffic, and economic development of the Dover and Smyrna area was threatened.

Industrial users of the highways increased as railroads became moribund during the

Eisenhower administration. These users demanded an open road system.

THE FINAL BYPASS

The state’s response to this growing congestion is Route 1, formerly known by such working titles as the Dover Bypass or the Route 13 Relief Route. Planning and development went on for more than thirty years. Unlike its predecessors, this highway is a limited-access corridor, with few ramps into the adjacent communities. It segregates local and through traffic, allowing vacationers to whisk along to the beach while local residents go about their business. During construction of this bypass, several wetland areas were adversely impacted. Part of the mitigation of these impacts is the wetland replacement project that made this study necessary.



Plate 2
The ultimate project objective

Delaware Route 1, a restricted-access toll road, is the latest attempt to divert through traffic away from Delaware’s communities, consistent with Coleman DuPont’s dream.