

by

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Introduction

Of all the original thirteen colonies, New Jersey's historical resources are perhaps the most varied. A major reason for this is that New Jersey was, without question, the most culturally diverse of the European North American colonies. Such diversity continued into the national period and, with continued in-migration, even to the present day. By the time of the first national census (1790), New Jersey possessed a distinct set of cultural regions. These were a function of her settlement history and lasted (at least in terms of characteristic features on the landscape) well into the nineteenth century.

An additional set of factors promoting diversity is and was present in the state's physical milieu. Physiography, soils, drainage, vegetation, mineral resources and, to a certain extent, climate, vary remarkably for such a relatively small area. These physical factors provided quite a different set of economic opportunities from place to place and through time, depending on relations with the outside world - especially Western Europe, New England, and the Caribbean in the early years. Changes in technology also affected the ways in which resources were perceived and utilized.

The first permanent settlement by Europeans in what later became New Jersey was by the Dutch at Bergen (Jersey City) in 1660. Old Bergen County (present Bergen, Passaic, and Hudson) continued to attract the Dutch and those associated with them (Flemings, Huguenots, Germans, Scandinavians, etc.). In 1664, when Dutch colonial rule ended and was superseded by the English, New Englanders began to move into the areas south of Bergen, especially present Essex, Union, Middlesex, and Monmouth Counties. In the mid-1670's, Quakers of English origin began settling the southwestern portion of the state. Joining them came Swedes and Finns, who had been residents in what was to become Pennsylvania.

In the 1680's, Dutch farmers from Long Island came to the Raritan Valley, Somerset County, and to northern Monmouth County. Slavery was not unknown to other cultural groups in New Jersey but was associated especially with the Dutch, thus introducing a significant population of African origin to present Bergen, Hudson, Passaic, Somerset, and Monmouth Counties.

By about 1700, the fertile agricultural lands of the Piedmont and Inner Coastal Plain had been occupied sparsely by these groups (Map 1). Joining them at about that time were Pennsylvanians of German and Scots-Irish backgrounds who constituted a significant proportion of those settling in northwestern New Jersey, especially from Hunterdon County north.

By 1765, permanent settlement had been established in all areas except for parts of the northern (glaciated) Highlands, the Kittatinny Ridge, part of the Great Swamp, and much of the Outer Coastal Plain. A great contrast in population density between the Inner and Outer Coastal Plains is apparent through 1810 (Maps 2 and 3). Comparatively little is known about the origins of the population of the Outer Coastal Plain. New Englanders settled Cape May early and some fishing communities were established along the coast. The Finn-Swedes, having a tradition of forest settlement in northern Europe, moved early to the Pines.

Not to be forgotten is that the aboriginal population was in evidence and living, in some cases, in close relationship with Europeans. The latest sites of aboriginal occupation were undoubtedly in the Outer Coastal Plain and the Highlands.

The First Century of European Settlement: 1660-1764

The first permanent European settlement in New Jersey dates from 1660. Many date the origin of New Jersey from 1664, when English rule began and the name "New Jersey" was conveyed. An isochronic map of settlement in New Jersey terminating in 1765 is in existence (Map 1), so a convenient period of study can be argued to date from the beginning of permanent settlement to the immediate pre-Revolutionary period¹.













A logical division of cultural resources dependent on the activities of Europeans and Africans can be based on contrasts in the settlement landscape (Map 4). Historical geographers and others have emphasized that one very basic contrast in the English North American colonies was between New England, where many agglomerated settlements were established, and the South, where extreme dispersion was the rule (Trewartha 1946: 568).

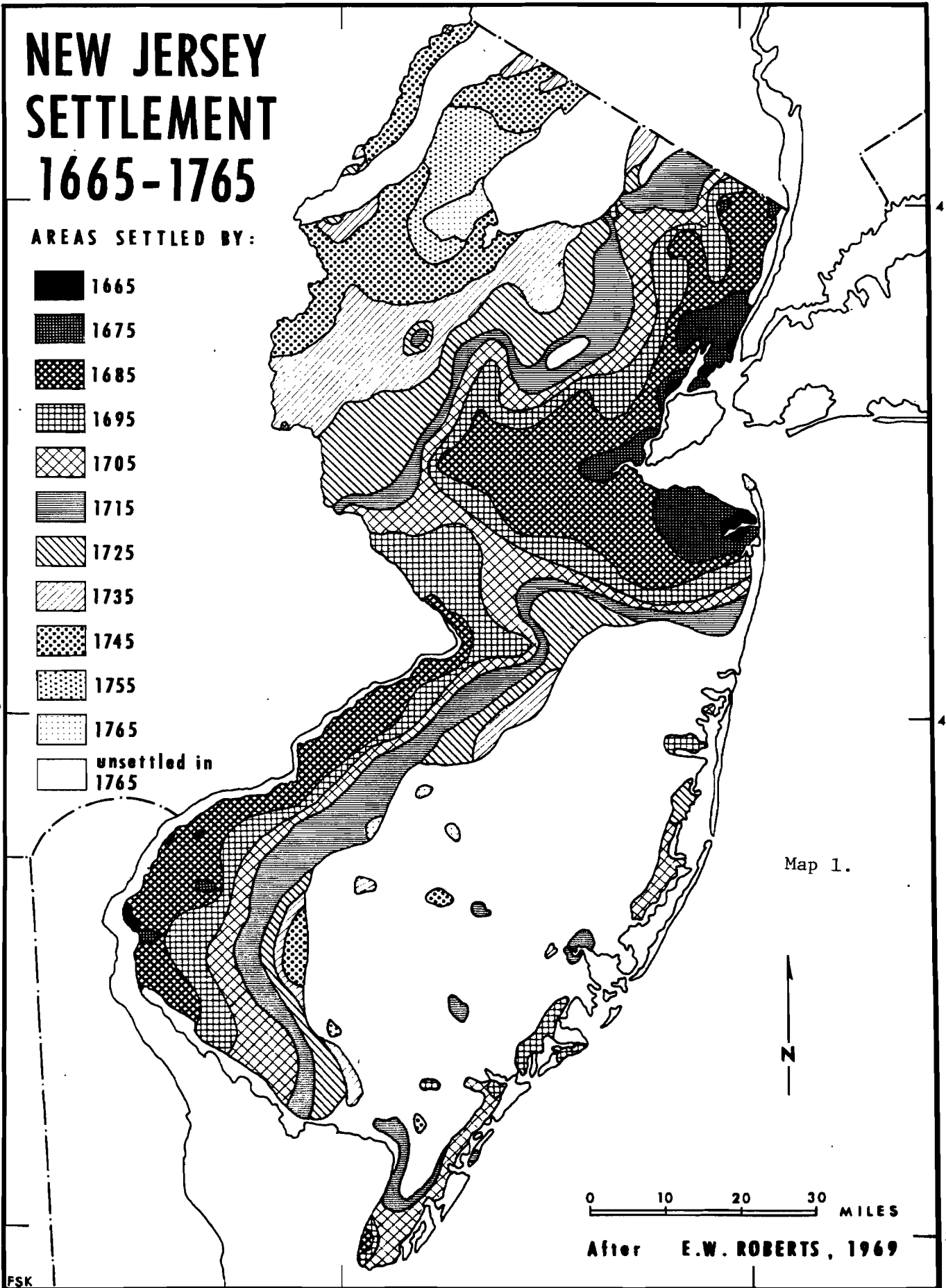
Agglomeration may be defined as a tendency to cluster residences and to include central place functions such as a church,

1. One reviewer (Huey) of the first draft of this commentary was dismayed that transitory European settlements such as those of the Dutch and Swedes (the New Haven Colony in Salem County could also be mentioned) were not discussed. This writer's charge was to deal with permanent settlement, however. The transitory settlements are dealt with by the author in Land and People, Chapter 3.

NEW JERSEY SETTLEMENT 1665-1765

AREAS SETTLED BY:

-  1665
-  1675
-  1685
-  1695
-  1705
-  1715
-  1725
-  1735
-  1745
-  1755
-  1765
-  unsettled in 1765



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MAP 2
POPULATION DENSITY
OF NEW JERSEY IN
1784

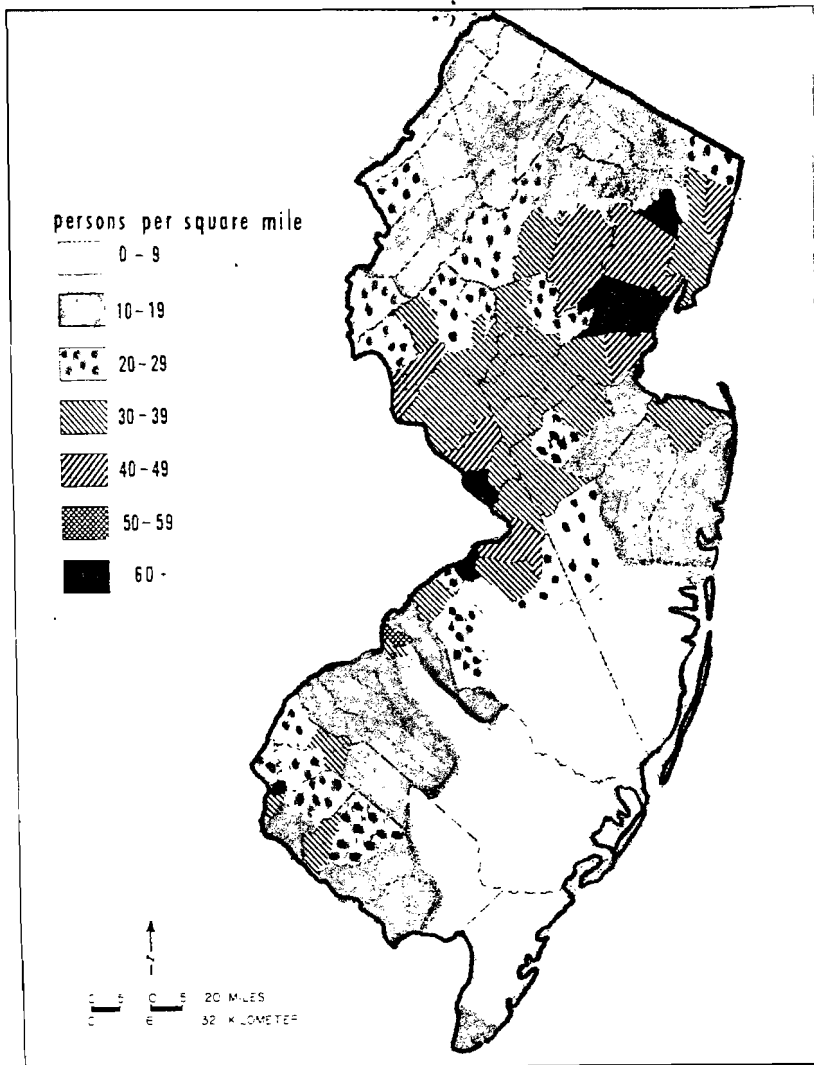
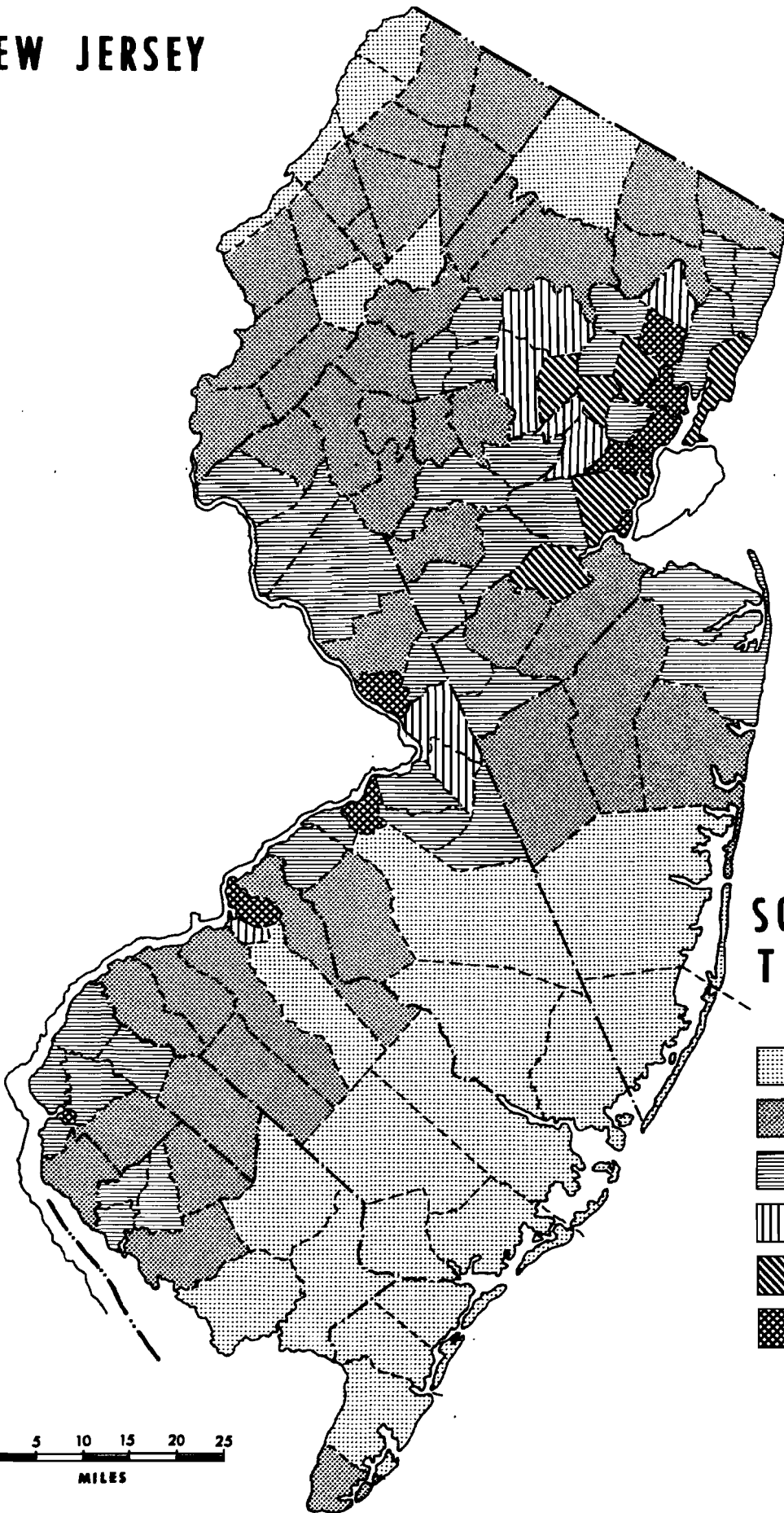


TABLE 1.
New Jersey--Approximate Population Density
Per Square Mile Per County 1726-1810







County	1726	1738	1745	1772	1784	1790	1800	1810
Salem	5	7	9	20	28	34	39	42
Cape May	3	4	5	8	10	11	13	16
Gloucester	2	3	4	9	11	14	16	20
Burlington	5	6	8	16	19	22	26	30
Monmouth	5	6	8	-	14	16	19	21
Middlesex	11	13	21	-	34	45	50	57
Somerset	11	22	9	-	36	42	43	50
Essex	9	13	26	-	56	74	93	109
Bergen	5	7	6	-	22	29	35	39
Hunterdon	2	3	16	31	37	40	43	49
Morris	-	-	21	25	29	35	39	48
Cumberland	-	-	-	10	13	17	20	26
Sussex	-	-	-	11	17	23	27	31

NEW JERSEY



Map 3.

POPULATION DENSITY PER SQUARE MILE BY TOWNSHIP 1810

	5 - 24.99
	25 - 44.99
	45 - 64.99
	65 - 84.99
	85 - 104.99
	over 105

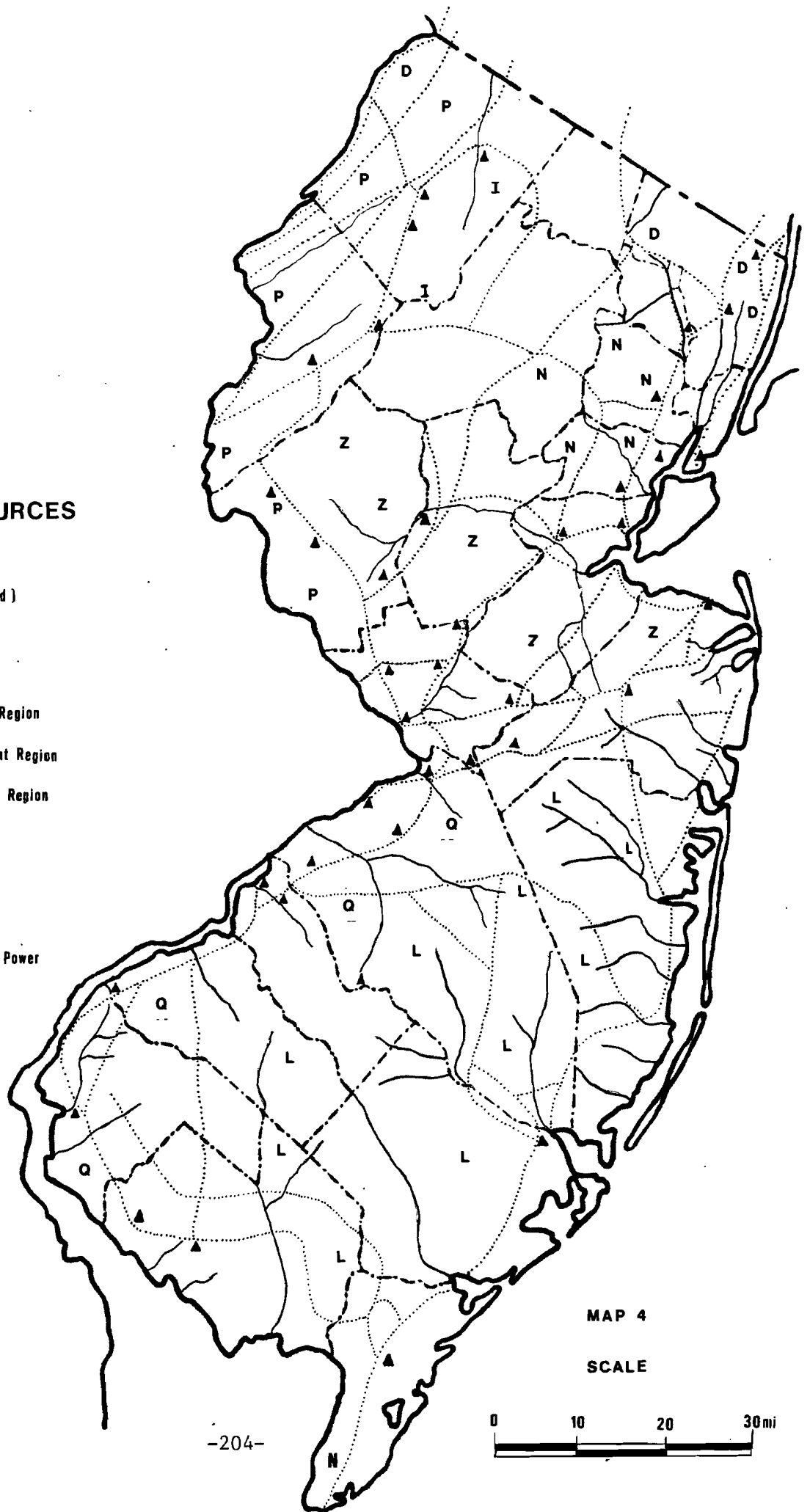
0 5 10 15 20 25
MILES

N



CULTURAL RESOURCES 1660 - 1764

- Major Road (generalized)
- ▲ Agglomeration (general)
- D Dutch Settlement Region
- N New England Settlement Region
- E English Quaker Settlement Region
- P Pennsylvania Settlement Region
- Z Zone of Heterogeneity
- L Lumbering Region
- I Iron Region
- Stream Network Used for Power and Navigation



MAP 4

SCALE



meeting house, store, school, etc. With dispersion, residences are located far apart, central place functions are limited and often stand alone, in isolation from residences and from each other.

New Jersey received a substantial New England influx and, with that, a tendency toward agglomeration in the New England-settled areas. Also, the Proprietors planned certain places such as Burlington and Perth Amboy to be not only administrative centers but also major ports. Such was not to be, however, due to Philadelphia and New York capturing most of New Jersey's foreign trade very early. In New Jersey, there could be no question that dispersed rural residences characterized the settlement landscape.

The few agglomerated settlements varied as to function. Some had been planned to provide religious and social intercourse for people whose predominant activity (at least at first) was to be agriculture. These were the early New England villages such as Elizabethtown, Newark, and Piscataway. Others settlements were planned as administrative centers and ports (Burlington, Perth Amboy). Some grew as a result of the meeting of routeways (often aboriginal in origin) such as Trenton and New Brunswick. Others grew as county seats after the courthouses had been erected there. Morristown and Newton are examples.

Map 4 portrays those areas which were most likely in agricultural use by 1765 and those locations where known agglomerations of structures were in existence by that date. Agricultural land use was prevalent everywhere except for most of the Outer Coastal Plain, the northern (glaciated) Highlands, and Kittatinny Ridge. This is not to say that agricultural areas exhibited clear-cut appearances by 1765; many of these areas still remained in woodland. Woodlands also had an agricultural function, serving as areas of forage for horses, cattle, and swine. Oak forests were especially useful for swine; while the Pinelands, especially along the coast, could be burned and the resulting grasslands used for cattle which could range outdoors even during the winters that were milder than those in the interior.

Cultural resources associated with agricultural land use are concentrated in relatively small areas associated with dwellings and the immediate homestead, including significant outbuildings (barns, smokehouses, hay barracks, etc.). Outbuildings are one of the least known elements of material culture because aboveground remains have often vanished. Contemporary newspaper advertisements rarely fully describe these resources and, in any case, the newspaper advertisements display a regional bias in the state as this writer has pointed out (Wacker 1974:14).

Huey's comments on an earlier draft of this paper included a reference to a possible change in Dutch material culture from the combination house and barn of northern Holland which was introduced

very early (McMahon 1971: 226-229) to the prevailing New World pattern of separating the dwellings of people and animals. This writer has suggested that the New Jersey Dutch barn is an adaptation of the joint house and barn of northern Holland and that relatively few such structures characterize northeastern New Jersey's Dutch landscape where early acceptance of the English barn is indicated (Wacker 1978: 953). David Cohen, who has studied the houses built by the Dutch in New York and New Jersey, in conversation, has taken issue with this. On the other hand, Sophia Hinshalwood, in an unpublished study of the Dutch culture area of New York, has discerned early acceptance of English barns there (Hinshalwood, mss.). This is only one example of the controversy and lack of firm evidence concerning undocumented examples of material culture.

In addition to the Dutch barn, other material traits were acquired and altered as a result of New World residence. An example includes the two level Pennsylvania barn adopted by Scots-Irish and others, apparently from Swiss settlers (Jordan 1980: 165-176). Similarly, log building techniques, probably from the Slavic-German borderlands, entered the Pennsylvania cultural stream (Wacker and Trindell 1968:265; Jordan, personal comm.). Contrary to Greiff's assertions, there is no information concerning these traits in newspaper advertisements or in the archives of the Historic American Buildings Survey (HABS). Eighteenth-century advertisements do not discuss building techniques and the HABS is skewed in the direction of high style residences. Outbuildings and folk or vernacular structures are rarely covered. This writer has already indicated that newspaper advertisements are biased regionally. This is also true for HABS which generally ignores northwestern New Jersey. The foregoing statements are not made to denigrate any disciplinary approach or data source. The fact is that with certain classes of structures, one of the best data sources may well be in the sub-surface. Thus, the farmstead, with its complex of structures, should be a research and preservation priority.

The siting of farmsteads was selected with at least some of the following criteria in mind. First of all, the site had to be within the confines of the land farmed. This, of course, was not the case with the New England - established villages. Site location was perhaps less constrained in the southwestern part of the state where properties tended to be much larger than in the northeast. All things being equal, however, the important criteria included good drainage, proximity to a water supply, and access to some means of transportation - road or river, with the latter most important in the earliest days of settlement. Many of the earliest sites were also chosen for their exposure, generally facing southward, and for their view.

As indicated above, there are many scholarly uses for the cultural resources associated with farmsteads in existence by 1765. By this date, New Jersey possessed the greatest cultural heterogeneity of any English colony. Distinct cultural regions, based on the forms of traditional houses and rural outbuildings, have been identified for eighteenth century New Jersey. As sketched on Map 4, these regions included a Dutch-settled area in the extreme northeast, a New England-settled area immediately to the south, an English Quaker region in the southwest, and a Pennsylvania-settled area in the northwest. Cultural fragmentation characterized the Raritan Valley and very few people lived in the Outer Coastal Plain where English Quaker and New England influences met Fenno-Swedish traditions. In the glaciated Highlands, too, sparse population and fragmentation was the rule, with ironworking communities often utilizing workers of several different cultural backgrounds (Kury 1969: 86-87).

Some scholars, on the basis of documentary evidence such as wills and tax records, have emphasized that there were few economic differences during the eighteenth century between people of various cultural origins (Lemon 1972). On the other hand, based on the aboveground built environment, especially houses, barns and the like, other scholars have identified great contrasts (Kniffen 1965: 549-577; Glassie 1969). Detailed excavations of sites in the several identified culture areas can be an additional source of information on this question. Were food habits distinct? Were artifacts different? When did acculturation occur? How did the Dutch of Monmouth County differ from those of Bergen County?

Light can also be shed on the spatial and functional organization of the farmstead. What was the relationship between the house and the outbuildings? Did this vary from region to region and through time? Did frame or brick or stone replace log buildings in much of western New Jersey? Can notching (corner timbering) techniques be identified for northern (Pennsylvania German?) versus southern (Finn-Swedish?) New Jersey? Can Finn-Swedish material culture be identified archeologically?

These possible examples only scratch the surface (pun intended). Excavation of rural sites should also provide some idea of trade patterns and of the trade hinterlands of the several ports - or at least of New York and Philadelphia. This surely had a cultural as well as an economic impact.

Another problem to be addressed in regard to the rural agricultural economy is that of labor supply. Extant tax lists provide the notion that the Quaker southwest utilized landless whites as agricultural laborers. Where did these people live? Similarly, the black slave population of the Dutch-settled areas are described

as living with their owners or in separate, relatively humble, structures. Are there any material remains which would suggest African cultural baggage?

As indicated, agglomerated settlements had several reasons for existence. Beyond a very general kind of knowledge supplied by travellers' accounts, tax lists, and other kinds of sketchy documentary evidence, there is not nearly enough known about them. Even their relative size is not known, for example. Tax lists were almost always based on a fairly large rural township with no subdivision for any agglomerated places within the township. One reviewer (Greiff) felt that urban places had been "drastically disturbed" and that conventional sources such as maps and lists of people by occupation could suffice for investigating agglomerated places. It may well be that most vestiges of the past have been removed from New Jersey's urban places, but recent excavations in New Brunswick suggest that this may not universally be the case (Crozier 1978, 1980). As to conventional manuscript sources, this writer does not believe that enough such material exists to answer many of the questions to be addressed.

One set of data to be extracted from archeological study of agglomerated places could be their sizes, at least in numbers of structures at various points in time. The various functions of the nascent urban places could also be ascertained.

Agglomerated places functioned out of all proportion to their actual size as vehicles of change brought about by the residence of non-farmers in contact with the larger outside world (Lemon 1972: 118-49). If nothing else, commercial interrelationships between European and major American ports, rural service centers, and agricultural districts may be ascertained. Within the larger settlements, the question of function and residential character can be determined. Did distinctive zones or sectors exist in regard to economic activity, social class, race?

Agglomerated settlements certainly differed, at least in their contemporary reputations. Newark, the most compact and most orthodox of New England settlements, had become, by the 1760's, the abode of wealthy merchants. This was even more true of Elizabethtown, especially in the early national period. Perth Amboy and Burlington were also the chosen abodes of genteel folk. On the other hand, workaday places like New Brunswick and Trenton apparently were not. Will the archeological record shed any light upon this?

Were there architectural differences between culture groups in the "urban" settlements? In New Brunswick, Peter Kalm identified brick facades and stoops on houses (Benson 1966:121); while, roofing tiles were discovered in the Hiram Market area (Crozier 1979). The acculturation of New Englanders to some Dutch practices in Essex County appears to be early (Wertenbaker 1963:153).

Agglomerated settlements, as suggested above, did not come into existence as a result of industrial activities. The nature and scale of various economic activities in the towns, which are now relatively unknown, can be further determined during archeological investigations. For example, tanning may have been an early activity found in some agglomerated settlements, as it was in Newark.

In most cases, industrial activities depended on water power. It is probably true that by 1765 every good size stream, other than for a large portion of the glaciated Highlands, was being utilized for some industrial activity. Extant tax lists suggest this for the Revolutionary period.

A very early industry centered around sawmills. Little is known about these mills and undoubtedly many of them disappeared as land clearance progressed. Exploitation of the woodlands certainly continued for a long time where permanent clearance did not take place. This was especially true in the Pinelands of southern New Jersey where the exploitation of white cedar, which was shipped to New York, Philadelphia and farther afield to such places as the Caribbean, was very profitable. Much of the industry in the Pines was illegal with documentary evidence concerning its wide-spread nature dating from the 1680's (Wacker 1975: 323).

Since most Europeans who settled in New Jersey used frame construction, sawmills were ubiquitous. The books of some of the sawmill operations in existence relatively late in the period (1760's) suggest that in well-settled areas, even very small water-courses were harnessed to provide energy (Camp, mss.).

The use of small streams was also associated with the milling of grain. Earliest settlers could use a hand-operated rotary quern for wheat, or a mortar and pestle device for Indian corn but this was tedious and time consuming. Professional millers were soon on the scene, and in the case of New England settlements, were often provided financial inducements to establish themselves. Mills were of at least three types with the tub or Norse mill operating like a turbine on extremely small rivulets. Undershot wheels could be placed directly in fairly large streams, such as the Raritan, while overshot wheels needed a head of water provided by a dam or by a flume leading water from a point above the mill structure. The point to be made here is that the different options available in terms of water wheels allowed various sitings of the mill structures (Hartman n.d.). This writer does not believe that there is enough knowledge to construct a predictive model at this point. Such would be a legitimate end of archeological work, however.

Another classification of gristmills involved those designed as "custom" mills and as "merchant" mills. Merchant mills were those that milled grain for export. It is to be remembered that New Jersey was one of the "Bread Colonies" and flour was a major (the

major?) export. There are few written descriptions of these early mills and how they may have changed through time; so, archeological investigation would be important here.

Since the transportation of flour by land was prohibitively expensive, merchant mills were probably located on the navigable waterways and at or near the head of marine navigation on the larger rivers. These mills were situated in or near agglomerated settlements such as Raritan Landing, New Brunswick, Trenton, etc. Bake houses for production of baked goods for export also were associated with merchant mills, at least in Burlington and New Brunswick.

Gristmills were constructed where agricultural activity predominated (i.e. not in the Outer Coastal Plain). However, there were some gristmills in the Outer Coastal Plain where they often shared the same structure with a sawmill. Tidemills (the power produced by damming a full tide, then running a wheel on the ebb tide) were also found in New Jersey - at least in Salem County (Department of Environmental Protection, Hancock House mss.). These mills probably date to the eighteenth century, at least, and were functional in low lying tidal areas.

Windmills are recorded for the period under discussion in both English and Dutch-settled areas. Little is known about them, although a hilly site relatively devoid of water power is a logical place to find them.

A major use of water power was by the iron industry which was well underway by 1765, especially in the southern Highlands. The iron industry depended on waterpower to activate bellows for introducing air into forges and furnaces, and to provide the motion required to move the trip hammer which pounded the impurities out of the cast iron and worked pig iron into the bar iron of commerce. In addition to waterpower, the industry required reasonable proximity to the ore (generally magnetite in the Highlands) and somewhat closer association with the fuel source (i.e. charcoal) from the woodlands. This latter requirement influenced the migration of the industry away from agriculturally productive locales because it was not economical to leave good soils uncleared so that timber could be regenerated to service the iron industry (Muntz 1960: 315-323).

The iron industry encouraged settlement in the Highlands several decades before it would have occurred if agriculture had been the primary attraction. The iron communities were characterized by structures relating to the production of iron (forges, furnaces, coal houses, etc.), as well as by dwellings for the workers, often a "big house" for the iron master, a tavern or taverns, a store, and a grist/saw mill.

Iron communities were often culturally and ethnically distinct. Many had either German or Irish Roman Catholic workers when such people were rare in the Middle Atlantic region. While several excellent studies of the iron industry exist which explain the technology involved (DeVorse 1954; Kury 1969), much less is known of the people and the communities. Archeological investigations may help to shed some light on such subjects.

The iron industry provided a market for local farmers who worked marginally productive land because of its proximity to the iron communities. In addition, during the agricultural off season, farmers could obtain work as colliers, teamsters, etc. in the mills. Archeological investigations of these rural folk, many of whom were tenants or squatters, may be very instructive and may add to what little is known about these people from extant documents.

The iron industry served to develop the transportation system of the Highlands. As Lefferts noted in his comments on the earlier draft of this paper, much of New Jersey's material culture may be discovered and understood by studying the transportation systems and linkages. From earliest times of European contact, navigable waterways were the principal routes of contact with sites being located at the head of navigation. The excavation at Raritan Landing suggests that location in a floodplain was not seen as being too hazardous if the profits to be realized were great enough (Grossman 1978).

In addition to the highlands, the rivers of the Outer Coastal Plain should be investigated, especially the areas where sawmills were located. Also, contemporary writers allege that much smuggling existed in this region and presumably some archeological record remains. Underwater reconnaissance may locate some of the vessels that entered the bays and rivers, foundered, and sank.

On land, routeways soon developed over the relatively dense network of Indian trails. This was less true in the Pines of southern New Jersey, and most true in the corridor between New York and Philadelphia which was fertile, accessible to the two port cities, and densely settled. In fact, the well-tilled bounteous soils of this corridor earned it the description "Garden of America", from which the term "Garden State" is derived.

To reiterate, the greatest attention must be paid to the transportation network, both riverine and overland.² This network influenced, or was influenced by, human activities of the period. All of the activities elucidated above, as well as the placement of inns, ferries, bridges, commercial structures and the like, were related to the transportation network.

2. Because of problems of scale and information, the road network is greatly generalized on Maps 4 and 5. The most accurate depiction of the road network can be found in maps maintained by the Right-of-Way Division of the New Jersey Department of Transportation in Trenton.

PRIORITIES FOR RESEARCH: 1660-1765

- A. Dispersed Settlements (i.e. farmsteads)
 - 1. relationship between house and outbuildings
 - 2. building techniques and materials
 - 3. contrasts in artifacts
 - 4. evidence of dietary differences

- B. Agglomerated Settlements
 - 1. sizes and functions of central places
 - 2. trading relationships
 - 3. residential patterns
 - 4. ports such as Greenwich

- C. Industries
 - 1. siting, trade relationships, technology
 - 2. relationship with sawmills, gristmills, tanneries, bake-houses, breweries
 - 3. associated communities

From the Immediate Pre-Revolutionary Era to the Pre-Industrial Period 1765-1810

By 1766, most of the basic patterns which were to characterize the period through 1810 had been established. The northwestern portion of New Jersey experienced rapid in-migration but all counties swelled in population, probably through natural increase (Table 1 and Map 5). Essex County was the most densely settled, while the Outer Coastal Plain and parts of the northern Highlands and the Kittatinny Ridge continued to have few people (Maps 2 and 3). The population of 1810 may be described as the "old stock" of New Jersey with the new immigration that profoundly changed ethnic and cultural patterns dating from 1820 on. Perhaps the major cultural change discernable during the period 1765-1810 was the great thrust of Pennsylvanians into the northwestern part of the state.

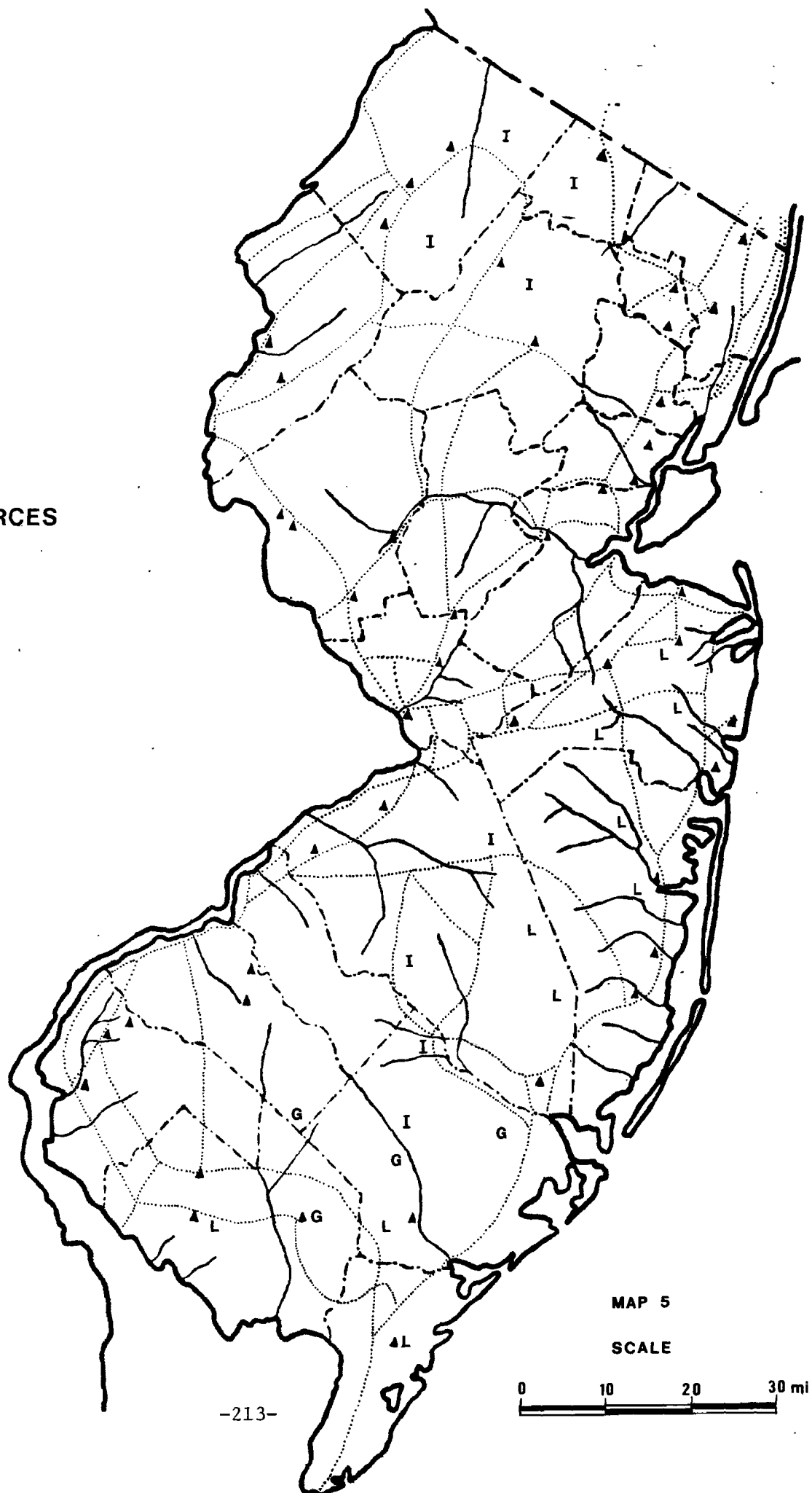
The fact that colonial rule came to an end after a turbulent and lengthy period of war, destruction, and economic dislocation, is an important circumstance. Central New Jersey, especially, was affected (Brush 1976). Some of the questions that archeological investigations may answer include the following: Is there evidence that a major change in material culture came about as a result of the sundering of relationships with Britain? Or, is a more gradual change, not related to the war, apparent in the archeological record? How may the several culture areas identified previously be compared? For example, were the Dutch-settled areas more conservative than nearby regions settled by others? Do any of the economic effects of the war appear in the archeological record?



CULTURAL RESOURCES

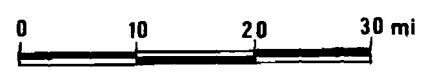
1765 - 1810

- Major Road (generalized)
- ▲ Agglomeration (general)
- I Iron Region
- L Lumbering Region
- G Glass Region
- ~ Stream Network Used for Power or Navigation



MAP 5

SCALE



Are more domestic manufacturers present? Does domestic industry begin to decline as foreign trade resumes? What was the extent and role of the Continental Army's maneuvers and installations in New Jersey?

To this writer, the whole northwestern part of the state during the Revolutionary Period is a relative terra incognita. Tax lists are absent for Sussex County which apparently lagged behind in the payment of taxes. Is this due to the relatively recent settlement of the area and/or to the loss of the export market during the war? It is instructive that the Board of Justices and Freeholders of Sussex County applied to the legislature for funds to supply the newly-arrived settlers with food in the mid-1760's (Wacker 1968: 50).

It is during the post-Revolutionary period that urban places are beginning to have many more functions than was formerly the case. In Essex County, with its relatively dense population, this was especially true. Newark was also beginning its extremely rapid growth as a result of the burgeoning of its factories and industries. Little is known about this process except from travel accounts (Roberts and Roberts 1947: 113).

At the same time, one is struck with the extremely small sizes of farms in the townships of Essex County by 1810. Given the agricultural technology of the day and the relative lack of an urban market for fresh produce, one must conclude that either the population was desperately poor or they were engaged in a multitude of non-agricultural activities which provided support. Other than for the relatively high returns provided by apple orchards and cider production, it is this writer's suspicion that the New England-derived settlers were real hustlers economically and that this cultural predilection is as much an explanation for Newark's initial economic take-off during the nascent Industrial Revolution as anything else. In any case, archeological investigation of existing sites could provide clues.

No one is more qualified to discuss Paterson than Edward Rutsch but since this writer is attempting the initial narrative on the historic period, the point to be made is that the City of Paterson was erected by 1792 as a planned manufacturing entity based on a magnificent (for the day) power resource. That resource was ably tapped by superior engineering talent at a site that offered excellent accessibility by inexpensive riverine transportation to markets. Yet (and statistics later than 1810 bear this out as well), Paterson lagged greatly after Newark in growth. Why? One wonders whether part of the answer is to be found in the nature of the available labor supply and their conservative rural focus. It seems to this writer that an archeological comparison of the environs of

Paterson and Newark for this time period might be an excellent laboratory experiment bearing upon the origins of the Industrial Revolution in North America.

The period from 1766 to 1810 was an active one in the Outer Coastal Plain. Although population did not increase in total numbers as rapidly as in the other physiographic regions, it kept pace in percentage of growth with the sex ratios indicating that families, rather than single men, constituted the population.

Around 1800, huge amounts of lumber were being shipped from areas such as the Great Egg Harbor hinterland. The iron industry (which had moved farther north in the Highlands after 1766) had also entered the Outer Coastal Plain before the Revolutionary War. This is not to say that the industry was not present before 1766. Peripheral to the region were works at Tinton Falls (1675), Bordentown (1725), and Mount Holly (1730).

In the Pines, however, the iron industry dated generally from 1765 with the establishment of Atsion. As in the case of the industry farther north, waterpower and fuel source dictated location more than did the ore (in this case, the limonite was excavated at the surface). Streams were dammed, beginning the appearance of the many artificial waterbodies in the Pines. As in the north, communities were established and local marginal agriculture was encouraged. It is also likely that the iron communities were distinct culturally and ethnically from the older communities in the Pines.

Contemporaneous with the iron industry of the Pines was the glass industry. Most glass manufacturers were established from the Mullica River south and relatively little is known about the history of many of them or the technology that was used. Appropriate deposits of sand, wood, and fuel, along with access to transportation were primary locational factors (Wacker 1979: 12-15).

It is again to be stressed, especially for the newly established and expanding industries of the day, that investigation of the transportation network is critical. Traffic on navigable rivers increased (the Delaware River north of Trenton was improved for navigation); roads were lengthened and improved. The turnpike movement was beginning in the earliest years of the nineteenth century, soon to be joined by the canals and the railroads as agents of, and responses to, economic and cultural change (Lane 1939: 115-411).

The year 1810 is a suitable time to end the period under discussion. Although 1790 is the year of the first national decennial census, data by township are first available by 1810. The new immigration begins after this, most notably with the Irish. These

years are, of course, transitional to what is generally referred to as the Industrial and Urban Revolutions. It is these phenomena, especially, which characterize the next period for study.

PRIORITIES FOR RESEARCH: 1765-1810 (Additional to those suggested for 1660-1764)

- A. Dispersed Settlements
 - 1. Sussex County
 - a. Pennsylvania influences
 - b. relative material wealth
 - 2. Essex County vs. Bergen and Passaic Counties
 - a. relative material wealth
 - b. occupational activities of the rural population

- B. Agglomerated Settlements
 - 1. Newark
 - a. rise of manufacturing (nascent Industrial Revolution)

- C. Industries
 - 1. iron and glass manufacturing in the Pinelands of southern New Jersey
 - 2. iron industry in the Highlands of northern New Jersey

- D. The American Revolution
 - 1. economic impact
 - 2. trading patterns
 - 3. sites of concentrated activity (i.e. encampments, supply depots, etc.)

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