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Population and Food Supply
of New Jersey.

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Trenton, N. J., April, 1930

Foreword

The aim of this brief study is to give a picture of New Jersey's population growth since the time of the first settlers. Some geographical factors, which influenced the establishment of the first settlements, and promoted the growth and expansion of population in New Jersey's territory, are discussed in quite a condensed form. With the problem of population usually is associated the question of food supply. An attempt is made to compare the varieties and quantity of the food produced on New Jersey farms with the varieties and quantity of food sold within the State by retail stores. Mr. C. J. Grant collected the figures on food sales in South Amboy and Mr. P. B. Mott collected the figures on food sales in Bridgeton.

The population figures by minor civil divisions, counties and the State, as well as the explanatory footnotes up to 1905, are taken from a New Jersey Department of State publication, prepared under the supervision of the Secretary of State by J. B. R. Smith, Assistant Secretary of State, and Charles S. Aitkin, Statistician of the Department, and issued in 1906 under the title "Compendium of Censuses, 1726-1905." The 1910 and 1920 population figures by minor civil divisions are taken from the United States censuses, and the 1915 figures are taken from the State census.

D. T. P.

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POPULATION AND FOOD SUPPLY OF NEW JERSEY

By **Dimitry T. Pitt**
Agricultural Statistician

PART I.

GROWTH OF POPULATION IN NEW JERSEY

INTRODUCTION

Geographical environment not only affects man's physical development and his mental attitude, but it is the cardinal factor in the distribution and density of population. The cold, poorly-soiled Siberian tundras are extremely thinly peopled and the hot Saharan hamadas, devoid of flora and fauna, are almost uninhabited. On the other hand the temperate zones of the world, where the climate, soil, distribution of water, relief of surface, flora and fauna are convenient for human habitation and for the satisfaction of human primary necessities, are densely populated.

Geographical conditions determine the selection of a place to live. When the first New Jersey settlers arrived they did not inhabit the swampy coast of the Atlantic Ocean. They settled at the banks of the Hudson and the Delaware rivers, where conditions were favorable for health and for procuring the means of subsistence.

Of course, the geographical factors alone do not account for the development of a given territory and consequently the concentration of population. The character of people, their will and energy, is another factor which must be seriously considered. It is a well-known fact that in spite of the richness of the natural resources and favorable conditions to develop them in America, its pre-European inhabitants did not accumulate great wealth and did not multiply rapidly. Only when highly energetic people came in, who knew how to use these favorable geographic conditions, did the territory begin to flourish and the population begin to grow.

New Jersey gives a wonderful example of the growth of population due to the extremely favorable geographic conditions and to the persistent efforts on the part of the inhabitants to exploit these conditions for mutual betterment.

**GEOGRAPHICAL FACTORS AFFECTING POPULATION GROWTH
IN NEW JERSEY**

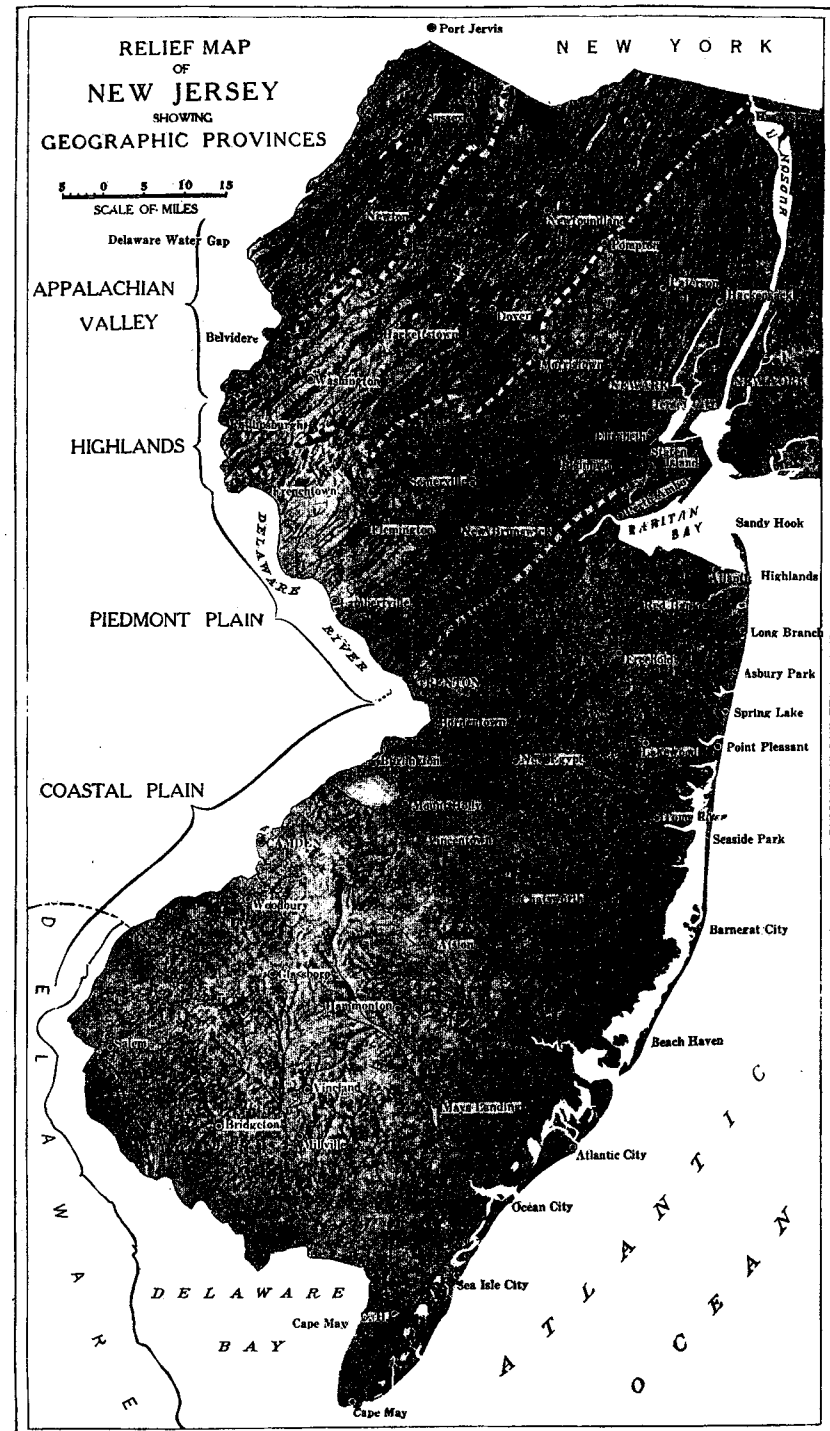
Location and Surface Feature

New Jersey is a portion of the Atlantic slope of North America and lies in the temperate zone between parallels $38^{\circ}55'40''$ and $41^{\circ}21'22.6''$ north latitude and meridians $73^{\circ}53'39''$ and $75^{\circ}35'00''$ west longitude. The State is limited by natural boundaries—rivers, bays and the ocean—on all sides except the northeast, where the New York-New Jersey line runs across the country from the Hudson to the Delaware River, a distance of 48 miles.

The extreme length of the State, from the most northerly point near Port Jervis to Cape May is 166 miles. From Trenton to the head of Raritan Bay, across the narrowest part of the State, the distance is only 32 miles. The portion of the State north of this line is nearly square and is about 55 miles across in a northwest-southeast direction and 65 miles from northeast to southwest. The southern portion of the State, which is 36 miles across from Bordentown to the shore, gradually broadens southward to a maximum width of 57 miles a little south of the line from Camden to Atlantic City. The length of this southern part, from Raritan Bay to Delaware Bay is 100 miles.

The land area of the State is 7,514 square miles, and 710 square miles of water (bays, harbors, lakes, etc.) lie within its borders, making a total area of 8,224 square miles.

As one looks on the accompanying relief map of New Jersey, he sees that the surface features vary greatly in different parts of the State. The Atlantic slope of the United States is included in two geographic and geologic provinces: (1), the Appalachian province, which extends from the Coastal Plain westward to the Mississippi lowland and from central Alabama northeastward into Canada, and (2) the Coastal Plain, which borders the Atlantic from the Gulf of Mexico to the Hudson River and which is represented northward to Massachusetts Bay by several islands and the peninsula of Cape Cod. These two provinces meet in New Jersey and their boundaries run obliquely in a nearly straight line through Trenton and New Brunswick. The Appalachian province consists of four major divisions running from west to east: (1), the Appalachian Plateau, (2), the Appalachian Valley, (3), the Appalachian Mountains, and (4), the Piedmont Plateau. The last three divisions enter into New Jersey. The New Jersey section of the Appalachian Valley includes a large part of Warren and Sussex counties and has an area of 635 square miles.



GEOGRAPHIC PROVINCES OF NEW JERSEY

The western part of the Appalachian Valley is occupied by the narrow valley of the upper Delaware; the eastern part represents the broad Kittatinny Valley. Between these two valleys, extending along the northwestern border of the State, from the New York boundary to the Delaware River at Delaware Water Gap, is the Kittatinny Mountain range. The length of the Kittatinny Mountain within the State of New Jersey is about 36 miles and its width varies from two miles in its southern portion to five miles in its northern end. The characteristic feature of this mountain is a remarkably even crest. The Kittatinny Mountain has an average elevation of about sixteen hundred feet above sea level, the greatest altitude being eighteen hundred and four feet at High Point. The valleys possess fertile soil and are a very convenient means for communication.

The Appalachian Mountains in New Jersey form a belt from ten to twenty-five miles wide and are known as the Highlands. They cross the northern part of the State southeast of the Kittatinny Valley in the northern part of Hunterdon, Morris and Passaic counties and the southeastern borders of Warren and Sussex counties. Their maximum elevation is 1,496 feet midway between Canistear and Vernon in Sussex County. These mountains long ago stood much higher than they are today. The rains, snows, ice, winds and rivers have been at work through the ages wearing them down to the present level.

The Highlands are abundant in minerals. Zinc, iron and cement rock can be mined extensively in them. The section is one of the most beautiful in the State. Between the mountains there are many lakes, such as Hopatcong, Macopin, Greenwood, Budd, Wawayanda, Green, etc.

The Piedmont Plain occupies the southeastern portions of Hunterdon, Morris and Passaic counties, large areas in Mercer, Somerset and Middlesex, and the whole of Union, Essex, Hudson and Bergen counties. This region very often is called the Sandstone Plain, due to the large extension of red sandstone. The Piedmont Plain varies from twenty to thirty miles in width and constitutes approximately one-fifth of the area of the State. It is chiefly a lowland of gently rounded hills separated by wide valleys with fertile soils.

The Coastal Plain occupies all that portion of New Jersey which lies southeast of the Piedmont Plain, and its area is equal to about three-fifths of the entire State. It includes the southern portions of Mercer and Middlesex counties and all of Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland and Cape May counties. Its length, measured from Raritan Bay to Delaware

Bay is about one hundred miles and its width varies from thirty-two to fifty-seven miles. The surface is gently sloping except in the Navesink Highlands and Mount Pleasant Hills, the highest point of the Coastal Plain reaching nearly four hundred feet above sea level. Along the Atlantic Coast south of Point Pleasant, a long row of sand ridges or sand bars arises. Between sand ridges and the mainland, an almost continuous channel of shallow water is present. The marshes and meadows are located along the coast. The soils of the Coastal Plain are varied.

Thus the surface features of the State are extremely favorable for settlements. The northern mountains are easily accessible to man, and the southern region is flat and suitable for all kinds of human activities and enterprises.

The Rivers

In early times rivers played a very important role as a means of communication and trade. The settlers understood that trade could not be developed unless there were cheap and convenient routes over which products could be shipped. The first settlers of New Jersey established their homes on the banks of the Hudson and Delaware rivers.

New Jersey has a large number of small streams and a few large rivers. In the Coastal Plain region, Toms, Mullica, Navesink, Maurice, etc., rivers flow into the Atlantic Ocean, and they are navigable to some extent by vessels of light draft. These rivers are not very large. The larger rivers are flowing in the northern section of the State, taking their origins in the Appalachian Valley, the Highlands and the Piedmont Plain. Among the rivers of this region, we may list Passaic, Raritan, Hackensack, Musconetcong, Wallkill, etc. Ships of moderate size operate on these rivers. However, the most important navigable rivers are not those which cross the State, but those which flow along the borders of New Jersey, namely, the Hudson and the Delaware. The Hudson River is navigable for large ships as far north as Troy, New York. Northern New Jersey is located along the mouth of the Hudson River. The Hudson River, New York Bay and Newark Bay are of tremendous importance for the development of the industry and commerce of the State. Along the waterfront, Jersey City, Bayonne, Hoboken and other big cities are located. The Delaware River is navigable as far north as Trenton, and in older days this river was one of the important factors in promoting the trade of the State.

The rivers of the northern part of New Jersey have developed waterfalls along their courses. These waterfalls are utilized in getting a cheap power to run the mills, factories, electric stations, etc.

*Soil Types**

The quality of the soil is of prime importance in the development of any region. Abundance of food attracts settlers, scarcity of food forces them to move to another region. The soils of New Jersey are suitable for the production of great varieties of food.

There are five distinct types of soil in New Jersey. In this respect the State is divided into five "Soil Zones."

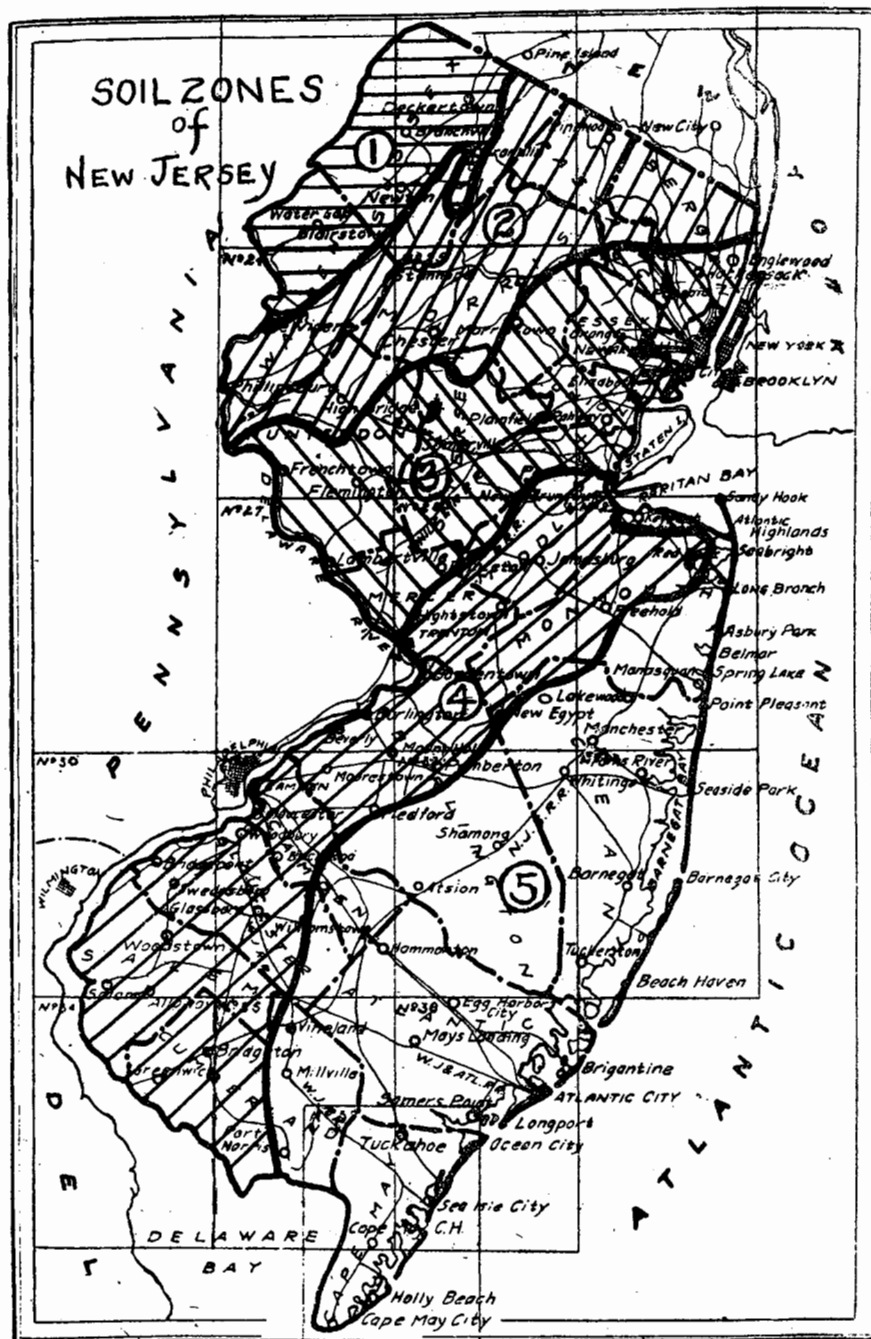
Zone 1. This zone is located in the northwestern portion of the State and extends from the boundary line of New York State near Quarryville in a southwesterly direction to the Delaware River just north of Belvidere. The soils of Zone 1 are heavy, being derived from glaciated shales, limestones and sandstone. A considerable area of this zone is occupied by muckland, on which various vegetables such as lettuce, celery, onions, beets, carrots, etc., are grown. The hillsides and valleys are excellent for dairying, which is developed to a large extent in this zone.

Zone 2. This zone extends from the New York State line from a point just northeast of Quarryville to the Hudson River, thence southwestward from Cresskill to the Delaware River at a point about midway between Phillipsburg and Frenchtown. The soils on the uplands are predominantly heavy, well-drained and usually loams derived from granite and gneiss, while limestone soils occupy the valleys. Dairy farming and fruit growing are developed in this zone.

Zone 3. This zone lies to the southeast of Zone 2 and extends from the Hudson River at Cresskill and Raritan Bay at Perth Amboy southwesterly to the Delaware River between Trenton and a point midway between Frenchtown and Phillipsburg. The soil is mostly loam, rich in plant food and derived from red sandstone and shales, with some grayish shales and sandstone. Corn, hay, wheat, barley, oats and forage crops are grown to a large extent in this zone.

Zone 4. This zone extends on the northeast from the Raritan Bay in an irregular southwesterly direction to the Delaware

* Adopted from "Soil Classification and Utilization," by L. L. Lee, Research Specialist in Land Utilization, New Jersey Agricultural Experiment Station.



SOIL ZONES OF NEW JERSEY

River at Trenton and Port Norris on Delaware Bay. The soil of this zone is extremely fertile, composed of loams, sandy loams, sometimes containing green sand marl. The farmers of this zone are engaged in growing white potatoes, sweet potatoes, tomatoes, corn, sweet corn, peaches, apples, asparagus, peppers, lettuce, onions, beets, string and lima beans, etc.

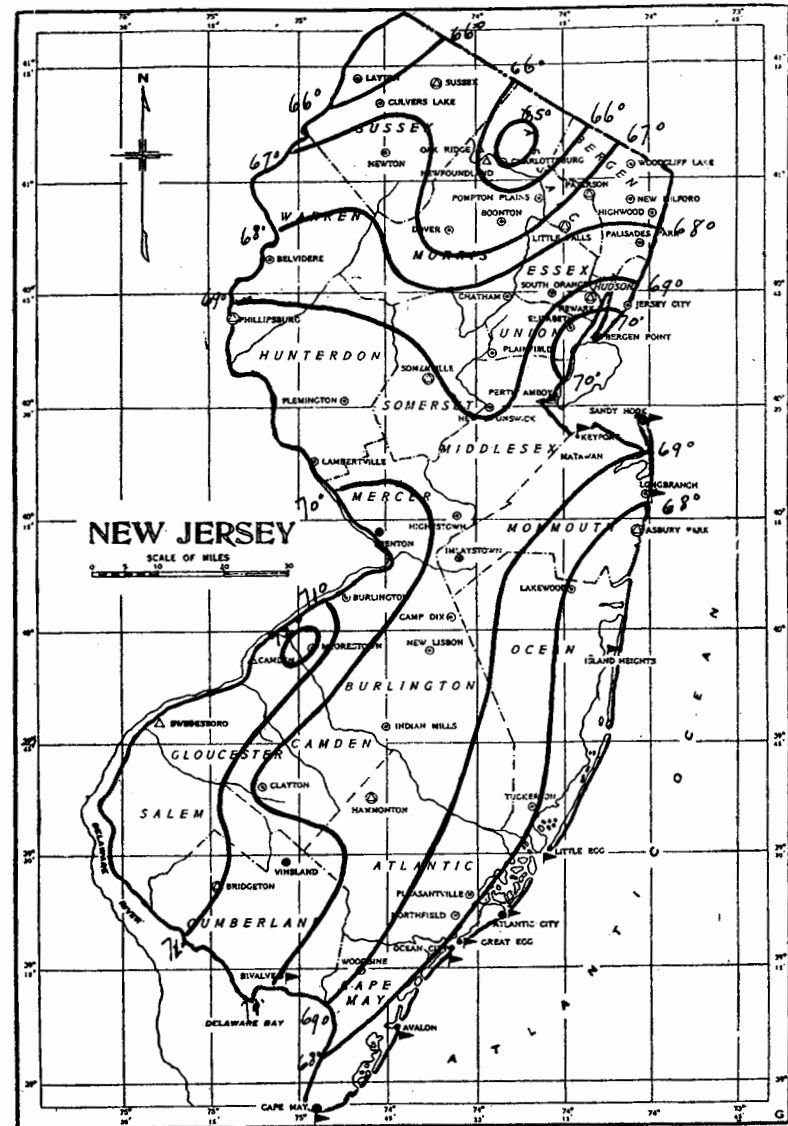
Zone 5. This zone lies southeast of Zone 4 and extends along the coast from Raritan to Delaware Bay inland to the southeasterly boundary of Zone 4. The soils of this zone are light, sandy and in places, especially along the Atlantic Coast, non-agricultural in character. This zone is famous for its production of white potatoes, sweet potatoes, vegetables, peaches, apples, small fruits, cranberries, poultry, etc. The non-agricultural localities in the majority of cases are occupied by forests.

Forests

When the first European settlers came to New Jersey they found the country almost entirely forested. According to the studies made by the New Jersey State Department of Conservation and Development, out of 4,808,960 acres of the total land area in the State, 4,480,000 acres, or 93 per cent, were occupied at that time by the original forests. In the northern portion of the State, oak, chestnut, hickory, birch and other hardwood trees of great commercial value were grown. In the southern part of the State, the forests consisting of pine trees were numerable. Along the shore of the Atlantic Ocean in low-lying swamps and bogs, abundant red and white cedars prevailed. The pioneers had a hard time to clear the land, but at the same time they realized what immense support to their well-being these rich virgin forests contributed.

Climate

The temperature, amount of precipitation and length of the growing season are determining factors in the development of a region and consequently in the growth of the population. New Jersey is free from extremes in cold and heat. The maximum temperature during July and August very seldom reaches 100° Fahrenheit. The minimum temperature in January and February seldom goes below 10° Fahrenheit. The average temperature from May to August, inclusive, ranges in the State from 66° to 71° Fahrenheit. The rainfall is exceptionally uniform, the average monthly precipitation being close to four inches. Neither heavy snowstorms nor extended



AVERAGE TEMPERATURE, MAY TO AUGUST (Inclusive)
(Map Furnished by Mr. G. Harold Noyes, Meteorologist)

cold periods are frequent; the winters in the southern counties are often mild and with but little snow. The first and last killing frosts average as follows: in the northern sections, September 25 to October 5, and May 2 to May 15; in the central section, October 10 and April 25; in the southern section October 15 and April 20. So the average growing season is six months. Destructive winds are practically unknown.

Fisheries

The northern section of the State with its abundant rivers and lakes is rich in trout, bass, pike, perch and pickerel. The Hudson and Delaware rivers previously were famous for an abundance of shad. The waters along the Atlantic Coast are rich in sturgeon, bluefish and weakfish. The very shallow coastal waters of Cumberland, Cape May, Atlantic, Ocean, Burlington and Monmouth counties are famous for their oysters and clams. The shellfish industry is developed to a great extent. Hundreds of thousands of bushels of shellfish are shipped from Bivalve, on the Maurice River, Greenwich, Pleasantville, Absecon, Tuckerton, Keyport, Maurice River, etc.

Mineral Resources

Iron.—The Highlands contain great deposits of iron ore. In the early colonial days the mining of iron ore was one of the biggest attractions to the settlers. Although due to the discovery of iron ore in other places of the country, mining in New Jersey is declining, yet at present iron ore is smelted in large quantities at Oxford, Warren County; at Wharton and Dover, Morris County, and at Ringwood, Passaic County.

Zinc.—New Jersey is the second state in the union in the quantity of zinc deposits and zinc production. Oklahoma is the first. At the present time the zinc mines at Franklin and Ogdensburg, Sussex County, contain the richest zinc ores in the world.

Clay Deposits.—Trenton in the days past and at the present time is famous for its pottery. Very rich clay beds are near Perth Amboy, South Amboy, Woodbridge and Sayreville. The colors of the clay are several, brown, black, blue, yellow, red and white. The quality of clay is excellent.

Building Stones.—New Jersey possesses several kinds of rock which are quarried for building and other purposes. The Highlands are rich in granite, limestone, slate, and contain in scattered places some marble and serpentine.

Glass Sand.—The Coastal Plain is abundant in sand of an excellent quality for use in manufacturing glass articles. Since the time of settlement, the glass industry has been quite important, and at the present time many factories at Vineland, Bridgeton, Glassboro and Millville are engaged in the production of various kinds of glass articles.

Proximity to New York City and Philadelphia

Since the 17th century, New York City has been the center of American commerce, trade and business. It is also one of the greatest cultural centers in the United States, with many schools, libraries, etc. Such centers always attract a large population. When the density of the population on Manhattan Island became great and when the industries could not find large enough space for their establishments, they searched for convenient nearby places. The western bank of the Hudson River answered to this requirement. So people and factories moved to the New Jersey side and in such a way New York City disposed of its surplus population. Philadelphia sends a large number of its inhabitants across the Delaware River.

In the opinion of Mr. R. H. Whitbeck, which is shared by many other writers—"The material growth of the State (New Jersey) finds its stimulus not primarily in its own resources, but in its geographical position between two great states (New York and Pennsylvania), two great cities, two great harbors, whereby it shares in the prosperity, the wealth, and the opportunities of both."* There is no doubt that there is some truth in this statement, but only a part. The sweeping conclusion is not justified by facts. Every state in the Union is lacking in some geographical conditions which are necessary for the development of commerce and industry. Pennsylvania is rich in mineral resources and entirely devoid of cotton plantations. New York is abundant in waterways, terminating in very convenient ocean harbors, yet coal and oil deposits, so far as we know at present, are poor. New Jersey has abundant deposits of iron ore and zinc; its soil in many places is rich; its farmers, small in number, produce yearly over 100,000,000 dollars' worth of agricultural products; its fisheries are numerous; its forests were and are rich in timber. Therefore, the natural resources of the State are sufficient to nourish its inhabitants and to promote commerce and industry. For a long time before the two neighboring states were elevated to an important position in the industrial life of the country, New Jersey was at a parity with them.

* "Geographical Influences in the Development of New Jersey," by R. H. Whitbeck, "The Journal of Geography," Vol. VI, No. 6, January, 1908.

New Jersey was settled not because of the proximity to New Amsterdam, but because New Jersey's surface features, rivers, soils, climate, natural resources, proximity to the ocean make it suitable for inhabitants. Perhaps the pioneers understood this better than we do now. The following documents illustrate clearly the role of natural resources in the matter of settlement on New Jersey territory. Mahlon Stacy, one of the first New Jersey pioneers, wrote to his brother, Revell, April 4, 1680, as follows: *

"But now a word or two of those strange reports you have of us and our country: I affirm they are not true, and fear they were spoke from a spirit of envy. It is a country that produceth all things for the support and sustenance of man, in a plentiful manner; if it were not so I should be ashamed of what I have before written. But I can stand, having truth on my side, against and before the face of all gainsayers and evil spies. I have travelled through most of the places that are settled, and some that are not; and in every place I find the country very apt to answer the expectation of the diligent. I have seen orchards laden with fruit to admiration, their very limbs torn to pieces with the weight, and most delicious to the taste, and lovely to behold. I have seen an apple tree from a pippin-kernel yield a barrel of curious cyder; and peaches in such plenty that some people took their carts a peach-gathering. I could not but smile at the conceit of it. They are a very delicate fruit, and hang almost like our onions that are tied on ropes. I have seen and known, this summer, forty bushels of bold wheat on one bushel sown; and many more such instances I could bring, which would be too tedious here to mention. We have, from the time called May until Michaelmas, great store of very good wild fruits, as strawberries, cranberries and hurtleberries, which are like our bilberries in England, but far sweeter; they are very wholesome fruits. The cranberries are much like cherries for color and bigness, which may be kept till fruit come in again; an excellent sauce is made of them for venison, turkeys and other great fowl; and they are better to make tarts than either gooseberries or cherries. We have them brought to our houses by the Indians, in great plenty. My brother Robert had as many cherries this year as would have loaded several carts. It is my judgment, by what I have observed, that fruit-trees in this country destroy themselves by the very weight of their fruit. As for venison and fowls, we have great plenty; we have brought home to our houses, by the Indians, seven or eight fat bucks of a day, and sometimes put by as many, having no occasion for them. And fish, in their season, are very plenteous. My cousin Revell and I, with some of my men, went last third month into the river to catch herrings; for at that time they came in great shoals into the shallows. We had neither rod nor net, but, after the Indian fashion, made a round pinfold, about two yards over, and a foot high, but left a gap for the fish to go in at; and made a bush to lay in the gap to keep the fish in; and when that was done, we took two long birches and tied their tops together, and went about a stone's cast above our said pinfold; then hauling these birch boughs down the stream, where we drove thousands before us, but so many got into our trap as it would hold. And then we began to haul them on shore, as fast as three or four of us could, but two or three at a time; and after this manner, in half an hour, we could have filled a three-bushel sack of as good and large herrings as ever I saw. And as to beef and pork, here is great plenty of it, and cheap; and also good sheep. The common grass of this country feeds beef very fat; I have killed two this year, and therefore I have reason to know it. Besides I have seen this fall, in Burlington, killed eight or nine fat oxen and cows, on a market day, and all very fat. And though I speak of herrings only, lest any should think we have little other sorts, we have great plenty of most sorts of fish that ever I saw in England, besides several other sorts that are not known there—as rocks, catfish, shads, sheep's heads, sturgeons;

* "Historical Collections of New Jersey: Past and Present," by John W. Barber and Henry Howe, pp. 23-24.

and fowls plenty—as ducks, geese, turkeys, pheasants, partridges, and many other sorts that I cannot remember, and would be too tedious to mention. Indeed the country, take it as a wilderness, is a brave country; though no place will please all. But some will be ready to say, he writes of conveniences, but not of inconveniences. In answer to those, I honestly declare, there is some barren land, as (I suppose) there is in most places of the world, and more wood than some would have upon their lands; neither will the country produce corn without labor, nor cattle be got without something to buy them, nor bread with idleness—else it would be a brave country indeed. And I question not but all then would give it a good word. For my part, I like it so well I never had the least thought of returning to England, except on the account of trade.

"MAHLON STACY."

Or as William Penn, Robert West, Thomas Rudyard and the other nine men gave an account of New Jersey in 1682 * as follows:

"Second—The conveniency of situation, temperature of air, and fertility of soil is such, that there are no less than seven considerable towns, viz: Shrewsbury, Middletown, Bergen, Newark, Elizabethtown, Woodbridge and Piscataway, which are well inhabited by a sober and industrious people, who have necessary provisions for themselves and families, and for the comfortable entertainment of strangers and travellers. And this colony is experimentally found generally to agree with English constitutions." * * *

"Fourth—For fishery, the sea-banks there are very well stored with a variety of fish—for not only such as are profitable for transportation, but such also as are fit for food there; as whales, cod-fish, cole and hake-fish, large mackerel, and also many other sorts of flat and small fish. The bay also, and Hudson's river, are plentifully stored with sturgeon, great bass and other scale-fish, eels, and shell-fish, as oysters, etc., in great plenty, and easy to take." * * *

"Seventh—The land or soil (as in other places) varies in goodness and richness; but generally fertile, and with much smaller labor than in England. It produceth plentiful crops of all sorts of English grain, besides Indian corn, which the English planters find not only to be of vast increase, but very wholesome and good in its use; it also produceth good flax and hemp, which they now spin and manufacture into linen cloth. There is sufficient meadow and marsh to their uplands; and the very barrens there, as they are called, are not like some in England, but produce grass fit for grazing cattle in summer season.

"Eighth—The country is well stored with wild deer, conies, and wild fowl of several sorts, as turkeys, pigeons, partridges, plover, quails, wild swans, geese, ducks, etc., in great plenty. It produceth a variety of good and delicious fruits, as grapes, plums, mulberries; and also apricots, peaches, pears, apples, quinces, watermelons, etc., which are here in England planted in orchards and gardens. These, as also many other fruits, which come not to perfection in England, are the more natural product of this country.

"Ninth—There is also already a great store of horses, cows, hogs, and some sheep, which may be bought at reasonable prices, with English moneys or English commodities, or man's labor, where money and goods are wanting.

"Tenth—What sort of mines or minerals are in the bowels of the earth, after-time must produce, the inhabitants not having yet employed themselves in search thereof; but there is already a smelting furnace and forge set up in this colony, where is made good iron, which is of great benefit to the country.

"Eleventh—It is exceedingly well furnished with safe and convenient harbors for shipping, which are of great advantage to that country, and affords already, for exportation, a great plenty of horses, and also beef, pork, pipe-staves, boards, bread, flour, wheat, barley, rye, Indian corn, butter and cheese, which they export for Barbadoes, Jamaica, Nevis, and other adjacent islands; as also to Portugal, Spain, the Canaries, etc. Their whale-oil and whale-fins, beaver, miak, raccoon, and marten-skins (which this country produceth), they transport to England."

* Ibid, pp. 25-26.

"Thirteenth—The Indian natives in this country are but few, comparative to the neighboring colonies, and those that are there are so far from being formidable or injurious to the planters and inhabitants that they are really serviceable and advantageous to the English—not only in hunting and taking the deer, and other wild creatures, and catching of fish and fowl fit for food, in their seasons, but in the killing and destroying of bears, wolves, foxes and other vermin and peltry, whose skins and furs they bring the English, and sell at less price than the value of time an Englishman must spend to take them." * * *

"Lastly—Although this country, by reason of its being already considerably inhabited, may afford many conveniences to strangers, of which unpeopled countries are destitute, as lodging, victualling, etc.; yet all persons inclining unto those parts must know that, in their settlement there, they will find their exercises. They must have their winter, as well as summer. They must labor before they reap; and, till their plantations be cleared (in summer time), they must expect (as in all those countries) the mosquitoes, flies, gnats and such like, may, in hot and fair weather, give them some disturbance, where people provide not against them—which, as land is cleared, are less troublesome."

THE EARLY SETTLERS IN NEW JERSEY

The first white man, who reached the territory of what is now the State of New Jersey, as it is recorded in historical documents, was Henry Hudson, an English navigator, in the service of the Dutch East India Company. The primary object of this mariner consisted in finding a northwest passage to India at 40 degrees North latitude. He failed to discover an inlet to the Western Ocean at Newfoundland, Penobscot Bay and Cape Cod. On August 28, 1609, Hudson entered Delaware Bay and River. Finding the navigation somewhat difficult on account of shoal water, he proceeded on his yacht called "Half Moon" but a short distance. From the Delaware River, Henry Hudson turned back to the Atlantic Ocean, and on September 9, 1609, he landed upon Sandy Hook. Soon after, Henry Hudson left Sandy Hook and sailed one-hundred and fifty miles toward the head waters of the Great North River of New Netherland. After his return to Europe, Hudson stimulated interest among the people of Holland toward the New World. The Dutch especially were attracted by Hudson's narrative concerning the abundance of fur-bearing animals in America, an important item to the Dutch, compelled "to resort to very warm clothing in winter." In 1610 the Dutch began to send ships across the Atlantic Ocean. In 1614 a port and trading house were established by the Dutch on the southwest point of Manhattan Island and called New Amsterdam, today, New York.

The precise date of the first European settlement within the limits of New Jersey is not known. Yet it is natural and logical to assume that within a very short time after the establishment of New Amsterdam, the settlers of this town began to explore the western bank of the Hudson River. In 1609 Henry Hudson saw on the western bank of the Hudson River a "cliff that looked of the color of white green,"

later the Castle Point estate of the Stevens family. This locality was known as Hobocan-hackingh, and the Dutch immediately after the settlement of New Amsterdam began to trade with the Indians at this point.

Despite the fact that the municipal government of the town of Bergen had been organized upon the 5th of September, 1661, there are evidences in favor of the conclusion that a number of Dutch, Danes and Norwegians as early as 1618 moved across the Hudson River and established settlements afterward known as Bergen and Paulus Hook (both at present are parts of Jersey City). The town of Bergen was the first chartered settlement within the limits of New Jersey.

In 1621 "the privileged West India Company" was formed in Holland. In 1623 this company dispatched a ship to the New World under the command of Captain Cornelius Jacobsen Mey. Captain Mey took with him settlers provided with food and articles for trade. The ship entered the Delaware River, landed near the stream called by the natives Sassackon, now Timber Creek, which empties into the Delaware River, a few miles south of Camden. He built near Red Bank (now in Camden County), Fort Nassau, where a Dutch settlement was established. But the settlers did not stay there long and during and after 1630 they abandoned this territory. Captain Mey explored the northern cape in the Delaware Bay and gave to this cape his own name, which it still retains (Cape May).

As early as 1643, the Dutch settlers from Esopus, New York, moving through the Minisink and Delaware valleys, made a settlement in what is now Pahaquarry Township, Warren County. In this section they developed copper mines.

In the 17th and beginning of the 18th centuries, Sweden was a very powerful factor on the European continent. Her army marched through the dominions of the present-day Poland, northern Russia and Ukraine. Her strength was so great that Russia was under constant fear of losing great provinces to her militant neighbor of the north. Being in the period of expansion, Swedes naturally took a big interest in the colonization of the New World. In March 1638, the Swedish explorer, Peter Minuit, with the man-of-war "Kalmar Myckel" and the sloop "Gripen," entered Zuydt Riviere, or Delaware. He landed at Murderkill Creek in the southern part of the State of Delaware. From there Minuit sailed as far north as Fort Nassau, a Dutch fort on the Big Timber Creek. In 1640 the northern boundary of New Sweden, as it was called, extended to a point opposite Trenton. In 1643 the Swedish Governor, John Printz, erected a

house (Printz hof) on Tinicum Island, midway between Chester and Philadelphia. On the New Jersey side of the Delaware River, John Printz in 1643 constructed Fort Nya Elfsborg (now Elsingboro Point, Salem County), located between Salem and Alloway's Creek. At this time, the territory under the authority of John Printz extended from Cape May to Raccoon Creek, and the total Swedish population amounted approximately to two hundred persons on New Jersey territory. In 1655 the territory of New Sweden passed under the authority of Holland and remained in her possession up to 1664; i. e., the time it was conquered by the English. Characterizing the influence of the Swedes on the future history of New Jersey, F. B. Lee * writes:

"So far as the limits of the State of New Jersey are concerned, the political influence of New Sweden was of a negative character. Few, if any, permanent settlements were made during this period (1638-1655), the Swedes in West Jersey being descendants of those adventurers who settled in Delaware and southeastern Pennsylvania.

"The town of Swedesboro is the most striking evidence of the occupancy of the Scandinavians. Upon a map made by Gregory B. Keen, there are preserved some curious place names given by small farmers and pedlary traders to points in West Jersey. Some of these place names are of Indian derivation. Thus, Maurice River was known as the Asseveticons, while Sepa Hackingh was immediately south of Bridgeton. Alloway's Creek was known as Kortén River (Short River), while the land between Alloway's and Salem Creeks was called Oitsessingh. Here stood Fort Nya Elfsborg (Elsingboro Point), while Salem was known as Asamo Hackingh. Between Salem Creek and the Delaware was Obissquasoit. In Oldman's Creek, the easy transformation from Alderman's Kil is seen. Narraticon (Raccoon), Maxtees (Mantua), Rode Udden (Red Bank), and Timmer (Big Timber) creeks are easily recognizable. East of Big Timber Creek lay Arwames and Tekoke, while between Big Timber and Cooper Creeks, the latter called Hjorte, lay Sassae Kon. Pensauken Creek, called Strut's Creek, its headwaters rising in the regions of Sinsessingh and Poenpissingh. Rancocas is apparently of Swedish origin, while Beverly and its vicinity was known as Marachonsicka. Tinneconck Island, directly above Burlington City retains its name. * * * The meadows between Bordentown and Trenton were known as Alunimigh, and Trenton Falls as the Falls of the Assumpink.

"Of these various places, the Swedes were to be found nearest Tinicum Island and Wilmington. These points were Salem and the creeks of Camden and Gloucester counties. Traders unquestionably went to the sites of Burlington and Trenton, and possibly made settlements at both places."

The Swedes did not preserve the purity of their blood. They were early amalgamated with both the Dutch and the English. In 1800 the Swedish language was almost completely forgotten in New Jersey.

The claim of the English, founded on prior discovery, to the territory now occupied by the Dutch and Swedes, was never abandoned. In 1640 the English captain, Nathaniel Turner, agent of the New Haven Colony of Connecticut, purchased from the Indian tribe Lenni-Lenapé a piece of land on the east and west banks of the Delaware River. In 1641, George Lambertson acquired some land from the Indians too. "A part of this English purchase extending

* "New Jersey as a Colony and as a State," by F. B. Lee, Vol. I, pp. 95-96.

from Cape May to Raccoon Creek (Nattaticons Kil) had been but recently transferred to the Swedish by the same Indian sachem who sold the land to the English. To confirm the title sixty individuals settled at Salem Creek (Varken's Kil), and on August 30, 1641, the Salem "plantations" were declared to be a part and parcel of the New Haven government.* From Salem the Connecticut Englishmen spread out to the south and established settlements in Cumberland County. Fairfield and Greenwich in Cumberland County took their names from towns of the same name in Connecticut. At the same time the English whalers from Long Island were located at Cape May.

In the year of 1664 the English Government sent a military expedition from Europe to the New World. These English forces conquered New Amsterdam in the same year and added it to the possession of the British crown. At the same time Sir Robert Carr, with two frigates, was sent to take possession of the colonies on the Delaware River. He conquered Holland's forces easily, using "two barrels of powder and twenty shots."

Upon the 24th of June, 1664, the Duke of York, who was in possession of the newly acquired territory, conveyed part of it to Lord Berkeley and Sir George Carteret. The conveyance to these individuals was made in a document in which for the first time the bounds of New Jersey were defined, and a name to the province given. We read in part the King's concession act:

"All that tract of land adjacent to New England and lying and being to the westward of Long Island, and Manhitas Island, and bounded on the east part by the main sea, and part by Hudson's river, and hath upon the west Delaware bay or river, and extendeth southward to the main ocean as far as Cape May at the mouth of Delaware bay, and to the northward as far as the northernmost branch of the said bay or river of Delaware, which is forty-one degrees and forty minutes of latitude, and crossed over thence in a strait line to Hudson's river in forty-one degrees of latitude; which said tract of land is hereafter to be called by the name or names of New Caesarea or New Jersey."**

The name *New Jersey* was given in honor of Sir George Carteret's defense in 1649 of his native island, the Isle of Jersey, which was attacked by the forces of parliamentarians. Thus these two noblemen were "true and absolute Lord Proprietors of all the province of New Caesarea or New Jersey." The territory of New Jersey at that time was very thinly populated by the Dutch, the Scandinavians and isolated Indian tribes. To Lord Berkeley and Sir George Carteret, New Jersey is indebted for the stimulation of immigration to Nova Caesarea as well as for the particular elements of people selected to come. On

* Ibid, page 91.

** "The Grants, Concessions, and Original Constitutions of the Province of New Jersey," by Aaron Leaming and Jacob Spicer, Philadelphia. Page 10.

February 10, 1664 or 1665, these two men published "The Concessions and Agreements of the Lords, Proprietors of the Province of New Caesarea or New Jersey," in which document the organic law, or "the Magna Charter of New Jersey" was given. The laws were very liberal. To every freeman who wanted to emigrate, one hundred and fifty acres of land were promised under the condition that he equip himself with "a good musket, * * * bandolier, and match convenient." A slave over fourteen years of age and a Christian servant upon the expiration of his or her "time", were promised to receive seventy-five acres of land. Religious freedom was guaranteed. Each parish was allowed two hundred acres for its minister, whose maintenance was to be provided by the Assembly. All these factors stimulated greatly the movement of people to New Jersey. As F. B. Lee writes: "The conditions surrounding emigration to a practically new and unexplored land were favorable. As shown by a contemporary writer, there were in the British Isles, at the close of the Commonwealth, a large body of yeomanry who extended to Charles II little more than a half-hearted welcome. Puritans and Independents in England, and descendants of the old Covenanters in Scotland, with many members of the rapidly growing sect of Quakers" were fearful of the return of religious persecution. "Added to this were soldiers of fortune, who had possibly fought with Cavaliers and Round Heads, men of no religious convictions, but who were willing to seek a new home; younger sons of the country gentry with no hope of patrimony; and a scattering representation from the submerged class of London and the smaller cities. It was from these social factors that Berkeley and Carteret sought their settlers." *

Philip Carteret, a relative of Sir George Carteret, sailed in April, 1665, from England, bearing his commission as the first Governor of New Jersey. From New York Philip Carteret went and landed on the point which he called Elizabethtown, in honor of the wife of Sir George Carteret. During the years of 1666 and 1667, the inhabitants of New Jersey were required by the Englishmen to take an oath of allegiance to the King and the Lords Proprietors. "To this end thirty-three settlers of Bergen, sixty-five inhabitants of Elizabethtown, thirteen residents of Woodbridge, twenty-four men of Navesink, two of Middletown, and two upon the Delaware River subscribed." **

On March 18, 1673 or 1674, Lord Berkeley sold his interest in New Jersey to members of the Society of Friends, John Fenwick and Edward Byllynge. The tract of land thus sold was known afterward

* Ibid, page 130.
** Ibid, page 133.

as West Jersey. In 1675, John Fenwick set sail to visit the new purchase in a ship called the Griffith or Griffin. In June he landed with his children, relatives, settlers and servants at a place to which he gave the name Salem, or Peace.

From that time a movement of the members of the Society of Friends to New Jersey began. William Penn, himself a member of this Society, influenced the Friends from Yorkshire and the Friends from London to come. In 1677 two hundred and thirty passengers arrived in New Jersey from England on the ship "Kent." They landed near Raccoon Creek, where the Swedes had some scattering habitations. Most of the passengers were Quakers. The leaders, or commissioners, of these immigrants left the place of landing and reached a place called Chygoe's Island, where they made a settlement in the autumn of 1677 and called it first New Beverly, then Bridlington and afterward Burlington. In 1677 and 1678 new shiploads of immigrants arrived from England. They settled on the tract of land from Timber Creek to Rankokas Creek, from Oldman's Creek to Timber Creek and from Rankokas Creek to Assunpink. The Yorkshire Friends chose from the Falls of Delaware down, and the London Friends chose Arwaumus (where the town of Gloucester is now), but the City of Burlington was built cooperatively by the Yorkshire and London Quakers. In 1680 West Jersey became somewhat populous.

The "Concessions and Agreement," having been published in New England, attracted in 1666 the attention of the Congregational churches in Milford, Bramford, Guilford and New Haven. The members of this church sent a delegation headed by Robert Treat to Governor Carteret to study the question of the possibility of coming to New Jersey. An agreement was reached and in May 1666, these New Englanders with "their families, their beloved pastor, their church records and communion service, their deacons, and their household goods" came to New Jersey. They purchased the land on the sites of the present cities of Newark, Belleville, Bloomfield and the Oranges. Thirty families were in the settlement. In the returns made to the council, the population of the English towns in 1673 is given as follows: Elizabethtown, eighty men; Newark, eighty-six men; Woodbridge, fifty-four men; Piscataway, forty-three men; Middletown, sixty men; Shrewsbury, sixty-eight men, with eighteen Quakers. In 1685 Milford, alias Newark, had a population of about five hundred souls.

At the end of the 17th century, Scotch settlers appeared in Monmouth County. At the same time the Huguenots came from France

to the New World. They were scattered from Nova Scotia to Florida. By 1686 part of them settled in Monmouth County and part of them settled on the Hackensack River.* Some of them reached Burlington and made this town their permanent residence.

It is estimated that in 1682 the population of New Jersey was nearly 6,000 souls. Between 1700-1702, the province of New Jersey was supposed to contain 20,000 inhabitants, of whom 12,000 were living in East Jersey and 8,000 in West Jersey, although Holmes' Annals gives a total of 15,000 for the year 1701.

Bohemia and Moravia sent immigrants to the New World as early as the beginning of the 18th century. In 1735 a Moravian settlement was undertaken at Savannah in Georgia. In 1740 the Moravian people left Savannah and migrated to Pennsylvania, where they settled and founded Bethlehem, Nazareth and Littitz. In 1742 the settlers in Walpack and the region drained by the Paulin's Kill in Sussex County, now Warren County, New Jersey, applied to the Moravians for a school and for the gospel ministry. The application was granted and a church and parsonage were erected for the use of the Evangelists, on the Broadhead settlement in Walpack. Moravians had regular preaching stations at Maurice River, Penn's Neck, Raccoon, Cohansey, Middletown, Trenton, Maidenhead, Crosswicks, Cranbury and Princeton. Moravians were very well educated and many of them were well fitted for missionary work. The first permanent Moravian settlement was established in 1769 in Sussex County. The Moravian center was at Hope, now in Warren County, and in 1790, when the first Census was taken, there lived in Hope and vicinity 147 Moravians. In 1808 almost all of them moved back to Pennsylvania. The Moravians did not play an important role in the colonization of New Jersey, yet their blood is flowing in the veins of inhabitants of Sussex County.

Concerning the first organized migration of Germans into New Jersey, Rev. T. F. Chambers writes: "In 1705 a number of German Reformed residing between Wolfenbuettel and Halberstadt, fled to Nenwied, a town of Rhenish Prussia, where they remained some time and then went to Holland, and from there embarked in 1707 for New York. Their frail ship was by reason of adverse winds carried into the Delaware Bay. Determined, however, to reach the place for which they were destined, to have a home among the Dutch, they took the overland route from Philadelphia to New York. On entering the fertile, charming valley in Nova Caesaria, New Jersey, which is

* "The Huguenots on the Hackensack," by Rev. D. D. Demarest, New Brunswick, New Jersey, 1886.

drained by the meandering Musconetcong, the Passaic and their tributaries, and having reached a goodly land, they resolved to remain in what is now known as the German Valley of Morrison (Morris) County."* From this point the Germans have spread into Somerset, Bergen and Essex counties. Rev. T. F. Chambers gives evidences that the year 1713 is "the most probable beginning" of German history in New Jersey. He studied church records and found that "In Amwell Township, Hunterdon County, there was a German church in the present village of Ringoes. There was a settlement of Germans in this vicinity as early as 1721.* * * * In Alexandria Township there was a church (German) before 1760, where at present the Presbyterian Church of Mount Pleasant is situated. * * * * Near Phillipsburg (Warren County) there was a Lutheran Church at least as early as 1762. * * * * In Stillwater, Sussex County, there was a Union church as early as the middle of the last (18th) century. * * * * The bulk of the German population was, therefore, to be found between Lambertville and Newton and the Delaware and Bound Brook."**

We do not possess the documentary evidences that Polish emigrants came early to New Jersey. Yet according to Rev. T. F. Chambers: "A well supported tradition maintains that a Polish colony, consisting of two hundred protestants, settled in the early part of the eighteenth century, in the valleys of the Passaic and Raritan rivers in New Jersey. They were led by Count Sobieski, a lineal descendant of the world-known John Sobieski, King of Poland, who routed the Tartars and Turks in 1683. The name Sabriskie, still found in New Jersey and New York, seems to be corrupted from Sobieski." †

Concerning the Irish immigrants to New Jersey, there is no precise date of their first arrival. However, "as early as 1682 many Irish families had settled in New Jersey; among them was Joseph English, who settled in Monmouth County and called his home Englishtown."*** John Hart, the signer of the Declaration of Independence, was of Irish descent. He was born at Hopewell, New Jersey, in 1708. In 1799 a small number of Irish settled in Trenton, and in 1805 in Madison. It was not until 1817 that the Irish began to come in increasing numbers, reaching the peak between the years, 1850-1900. "The appearance of Irish emigrants, not only men technically skilled, who pursued their trades in Newark and the nearby mill towns, Jersey City, New Brunswick and Trenton, but those less able, who

* "The Early Germans of New Jersey," by Theodore Frelinghuysen Chambers, pp. 25-26.

** Ibid, pages 36-37.

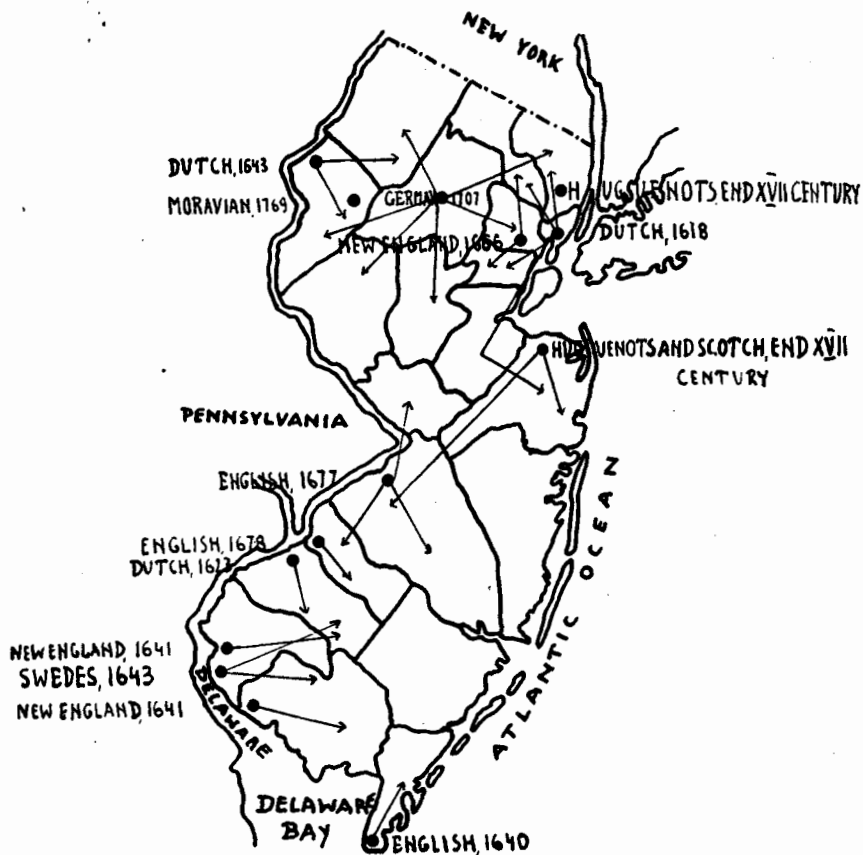
† Ibid, page 26.

*** "The Irish in The American Revolution and Their Early Influence in the Colonies." (Written especially for the "National Hibernian")

found work upon the Morris Canal and the Delaware and Raritan Canal and the new railroads" * was steadily increasing. In 1853 the Irish people within the State of New Jersey had thirty-three churches, of which three were in Newark.

Italian emigrants began to flow into the State of New Jersey at the end of the 19th century. They settled in the cities and towns close to New York City, part of them quite recently settled on farms in Gloucester, Camden, Cumberland and Atlantic counties.

* "New Jersey as a Colony and a State," Lee, Vol. III, page 320.



Map Showing the Places of the First Settlements in New Jersey by Different Nationalities with an Indication of the Spread of These Settlers

NATIVE- AND FOREIGN-BORN POPULATION OF NEW JERSEY SINCE 1860

In the following table the native-born and foreign-born populations for the census years, 1860, 1880, 1900 and 1920, are given:

	1860	1880	1900	1920
Total native born	549,245	909,416	1,451,785	2,417,287
Total foreign born	122,790	221,700	431,884	738,613
Foreign-born population—				
Place of birth:				
Asia	*34	*16	*409	.....
Africa	13	41	.....	.....
Australia	7	80	.....	.....
Atlantic Islands	15	26	.....	.....
Armenia .....	.....	.....	.....	2,275
Austria	506	864	14,728	36,917
Belgium	109	255	1,197	2,483
Bohemia .....	.....	429	1,063	.....
Canada	1,144	3,536	7,132	10,292
Central America	2	18	.....	.....
China	3	196	1,344	.....
Cuba .....	.....	146	.....	.....
Czechoslovakia .....	.....	.....	.....	16,747
Denmark	175	1,264	3,899	5,704
England	15,852	31,285	45,428	46,781
Europe (not specified)	14	59	.....	.....
Finland .....	.....	.....	367	2,109
France	2,408	3,739	5,543	10,165
Germany	33,266	64,935	119,598	92,382
Great Britain (not specified)	1	22	.....	.....
Gibraltar .....	.....	10	.....	.....
Greece	2	12	.....	4,521
Greenland .....	.....	27	.....	.....
Hungary .....	.....	272	14,913	40,470
Holland	1,328	4,281	10,261	12,737
Ireland	62,006	93,079	94,844	65,971
India .....	.....	131	.....	.....
Italy	105	1,547	41,865	157,285
Japan .....	.....	10	.....	.....
Jugo-Slavia .....	.....	.....	.....	3,313
Luxemburg .....	.....	28	.....	.....
Lithuania .....	.....	.....	.....	6,246
Malta .....	.....	8	.....	.....
Mexico	27	65	.....	.....
Norway	65	229	2,296	5,343
Pacific Islands	8	16	.....	.....
Poland	120	748	14,357	90,419
Portugal	14	23	.....	646
Roumania .....	.....	.....	478	4,564
Russia	38	301	19,745	73,527
Sandwich Islands	1	36	.....	.....
Sardinia	4	.....	.....	.....
Scotland	3,556	7,633	14,211	17,781
South America	39	157	266	955
Spain	36	114	.....	2,000
Sweden	88	1,622	7,337	10,675
Switzerland	1,144	3,040	6,570	8,165

* Except China.

	1860	1880	1900	1920
Syria				2,062
Turkey	6	50	636	.....
Wales	371	863	1,195	1,255
West Indies	278	375	*813	*1,120
Born at sea		112	.....	.....
Other countries	5	.....	1,389	3,703

ASCENDENCY OF NATIVE-BORN POPULATION

In 1860 there were 549,245 native-born inhabitants of New Jersey. Certainly they were the descendants of the early settlers, mostly English, Scotch, Dutch, Swedish and German. Among the foreign-born, the Irish influx at the time was the strongest, being estimated at 62,006 persons. The Germans, English and Scotch immigration to the State was intensive too. Italy sent just 105 people, Poland 120, Russia 38 and Austria 506. If we take the native-born population for the year 1860, as equal to 100, the foreign-born would amount to about 22.

In 1880 the native stock amounted to 909,416 persons and foreign-born to 221,700. Among the foreign-born the Irish led, being estimated at 93,079. Next to the Irish came the Germans, English and Scotch. If we again take the native-born population for the year 1880, as equal to 100, the foreign-born would amount to about 24.

During the period of time from 1880 to 1920, marked changes in the composition of New Jersey's population occurred. Previous to 1880, Irish, German, English and Scotch immigration prevailed. All other nations sent relatively few immigrants. But after the year 1880, a new type of immigrants began to come in increasing numbers. In 1900, the Italian population amounted to 41,865 persons; compared with 1,547 in 1880; Russian, 19,745, as compared with 301 in 1880; Polish, 14,357, against 748 in 1880; Austrian, 14,728, compared with 864 in 1880, and Hungarian, 14,913 against 272 in 1880. If we again count the native population in 1900 as 100, the foreign-born would amount to about 29. Therefore, the proportion of the foreign-born to native stock in 1900 was greater than in 1880.

In 1920 among the foreign-born, the Italians led, being 157,285 persons. German and Polish immigrants were almost equal in number, being 92,382 and 90,419 persons, respectively. Hungary, Austria and Russia continued to send a big number.

If native stock in 1920 is taken as equal to 100, the foreign-born would amount to about 31. Thus beginning from 1860, the foreign-born element in the State grew larger and larger in relation to the number of native stock.

* Except Porto.

POPULATION OF THE STATE OF NEW JERSEY FROM 1726 TO 1920

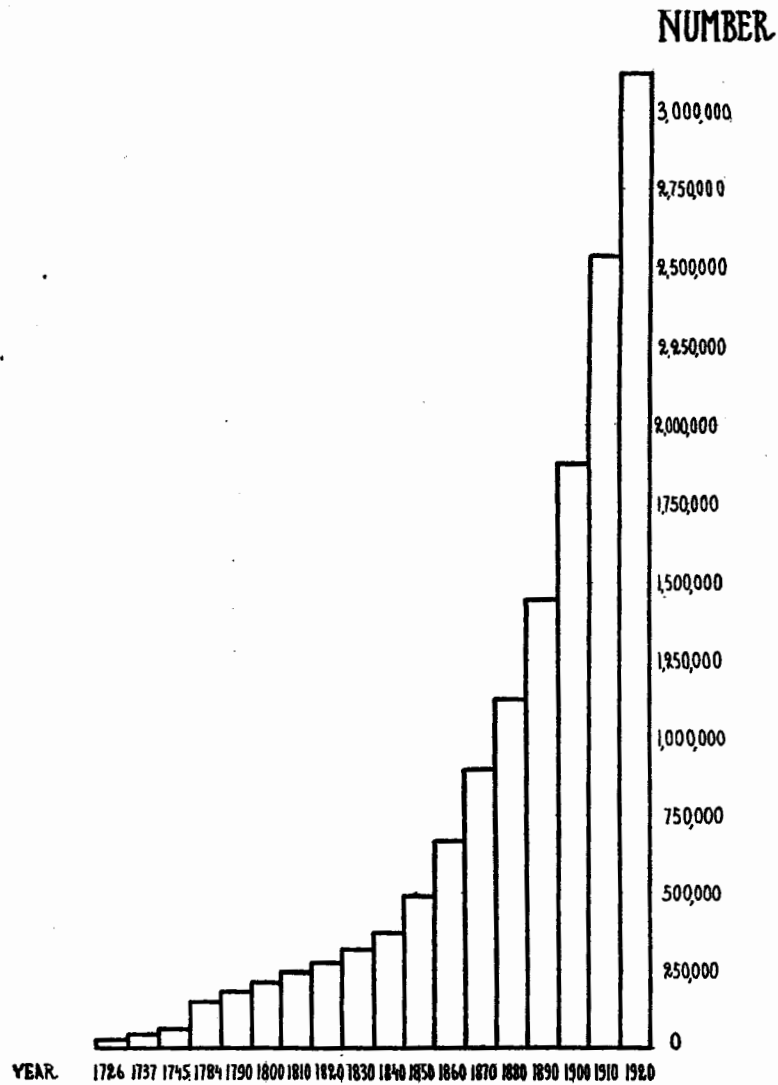
Year	Population	Year	Population
1726	32,442	1840	373,306
1737	47,369	1850	489,555
1745	61,403	1860	672,035
1784	149,435	1870	906,096
1785	184,139	1880	1,131,116
1790	211,149	1890	1,444,933
1800	245,562	1900	1,883,669
1810	277,575	1910	2,537,167
1820	320,779	1920	3,155,900
1830			

RATE OF POPULATION GROWTH IN THE STATE

If we take each previous census year as equal to 100, the following will be the rate of population growth for the State as a whole:

Year	Rate of Growth	Year	Rate of Growth
1726	100	1840	116
1737	146	1850	131
1745	130	1860	137
1784	243	1870	135
1790	123	1880	125
1800	115	1890	128
1810	116	1900	130
1820	113	1910	135
1830	116	1920	124

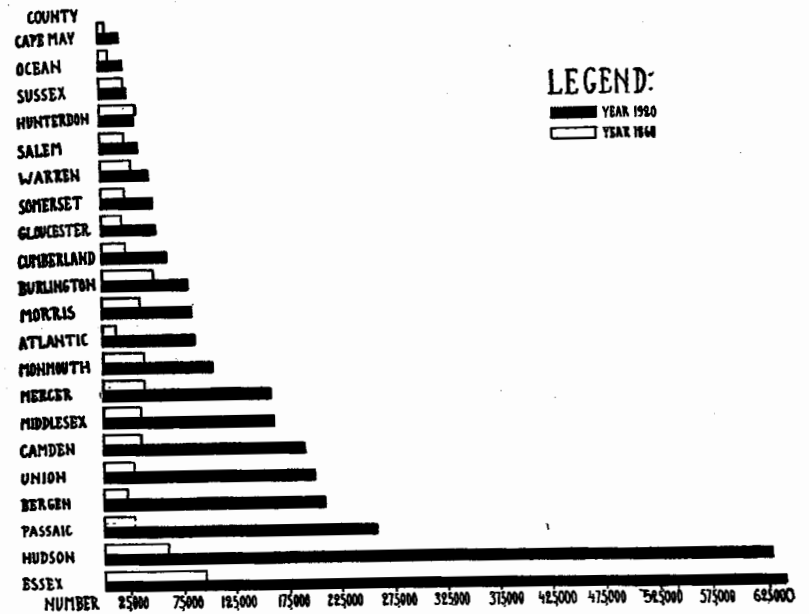
Omitting the years prior to 1790 on account of the uneven periods of time between the enumerations, we see that between 1790 and 1840 the growth of population in the State was continuous and more or less even. From 1850 to 1880 the growth became more intensive due to the big influx of Irish and German immigrants. Between the years 1870 and 1880 this intensive growth began to decline. After 1890 and up to 1910 it steadily rose again on account of the influx of Italian and eastern European immigrants. From 1910 to 1920 the growth declined, due probably to the World War, during the length of which immigration was small.



The Growth of Population in New Jersey Since 1726

The growth of population is not equal in all parts or counties of the State. The counties in proximity to New York City and Philadelphia show considerable increase, and the counties more or less distant from these two cities register moderate increase. If we express the population of each county in 1860 as equal to 100, the

following is the corresponding population in 1920: Essex, 659; Hudson, 1003; Passaic, 893; Bergen, 975; Union, 721; Camden, 553; Middlesex, 466; Mercer, 427; Monmouth, 267; Atlantic, 712; Morris, 238; Burlington, 164; Cumberland, 271; Gloucester, 261; Somerset, 218; Warren, 158; Salem, 163; Hunterdon, 98; Sussex, 104; Ocean, 198; Cape May, 273.



Population Growth by Counties. Year of 1860 is Compared with 1920

From this chart it is evident that Hudson, Bergen, Passaic, Essex, Union, Atlantic, Camden, Middlesex, Mercer and Monmouth counties show considerably larger growth than Cumberland, Morris, Gloucester, Somerset, Warren, Salem, Sussex, Ocean and Cape May. Although Atlantic and Mercer counties are not included in the New York or Philadelphia metropolitan areas, yet they register a big increase. Atlantic County has wonderful summer resorts which attract visitors and consequently business men who make their permanent homes in the county. The great growth of Mercer County is due to the expansion of the City of Trenton, as the administrative center of the State, and as an industrial and manufacturing center. Hunterdon County shows a decrease in population of 2 per cent since 1860.

POPULATION OF METROPOLITAN AREAS

The New Jersey sector of the Port of New York district, as it is defined in Chapter 151, New Jersey Laws of 1921, includes the following counties or a part of them: all of Hudson County; all except the extreme northwestern section of Bergen County; all of Passaic County south of Wayne Township; all of Essex County, except Caldwell and the western section of Livingston Township; all of Union County, except the western section of Summit Township; all of New Providence Borough and New Providence Township; all of Middlesex County, except Middlesex Borough, western part of Piscataway Township, western section of North Brunswick Township, southern parts of East Brunswick and Madison townships and the townships, boroughs and cities of South Brunswick, Plainsboro, Cranbury, Spotswood, Helmetta, Monroe and Jamesburg, and Monmouth County, including Matawan Township, Matawan Borough, Keyport, Keansburg, Raritan, northern part of Holmdel, northern section of Middletown and all of Atlantic Highlands.*

In the New Jersey sector of the Port of New York district, there were 261,323 permanent inhabitants in 1860; 574,552 in 1880; 1,138,206 in 1900 and 2,065,858 in 1920.

POPULATION OF THE NEW JERSEY SECTOR OF THE PORT OF NEW YORK DISTRICT SINCE 1860

Counties	1860	1880	1900	1920
Hudson	62,717	187,944	386,048	629,154
Essex	98,877	189,929	357,686	648,096
Bergen	13,668	25,974	64,231	183,047
Passaic	25,257	64,512	150,258	246,080
Union	26,472	52,880	93,017	187,826
Somerset	2,000	3,217	5,663	8,032
Middlesex	24,521	40,176	68,812	147,283
Monmouth	7,811	9,920	12,491	16,340
Totals	261,323	574,552	1,138,206	2,065,858

It is evident from this table that the population of the New Jersey sector of the Port of New York District since 1860 was doubled or almost doubled during each 20-year period. If the same rate of increase prevails during the period 1920-1940, the total population of the sector in 1940 will amount to about 4,500,000 persons, that is, the density of the population will reach 2,750 inhabitants per square mile. Such density is almost improbable, and we may assume that the surplus population will move toward the northwest, west and south of New Jersey. In our population estimate of the New Jersey sector in the Philadelphia district, we include all of Camden County except

* This boundary is approximate. For the exact definition consult Laws of New Jersey 1921, Chapter 151, pages 413-416.

Waterford and Winslow townships, and the following townships, boroughs and cities of Gloucester County: West Deptford, Deptford, Woodbury, National Park and Wenonah. The population of this sector is growing rapidly too, and it is logical to predict that by 1940 the population in this place will reach a mark between 300,000 to 350,000 persons.

POPULATION OF THE NEW JERSEY SECTOR OF THE PHILADELPHIA DISTRICT

Counties	1860	1880	1900	1920
Camden	30,702	58,635	103,090	185,212
Gloucester	4,213	5,217	8,650	11,724
Totals	34,915	63,852	111,740	196,936

The density of the population of this sector in 1940 will be great, and the surplus population will probably expand toward the north, east and south of New Jersey.

THE FARM POPULATION OF NEW JERSEY

According to the United States Census, the farm population of New Jersey in 1925 was estimated at 139,255 persons. In the following table the farm population figures are given by age and sex:

New Jersey Farm Population by Age and Sex in 1925

County	Total	All Farm Population			
		Under Ten Years of Age	Ten Years of Age and Over	Male	Female
Atlantic	7,836	1,677	6,159	3,231	2,928
Bergen	5,934	677	5,257	2,699	2,558
Burlington	11,638	2,541	9,097	4,892	4,205
Camden	4,089	971	3,118	1,621	1,497
Cape May	2,531	440	2,091	1,118	973
Cumberland	14,673	3,212	11,461	6,082	5,379
Essex	3,637	643	2,994	1,593	1,401
Gloucester	10,612	2,356	8,256	4,491	3,765
Hudson	260	50	210	122	88
Hunterdon	10,565	2,114	8,451	4,441	4,010
Mercer	6,037	1,227	4,810	2,627	2,183
Middlesex	8,484	1,221	7,263	3,835	3,428
Monmouth	12,465	2,425	10,040	5,343	4,697
Morris	4,707	794	3,913	2,095	1,818
Ocean	2,477	401	2,076	1,112	964
Passaic	2,571	242	2,329	1,222	1,107
Salem	8,734	1,809	6,925	3,916	3,009
Somerset	5,892	1,125	4,767	2,508	2,259
Sussex	6,355	1,247	5,108	2,754	2,354
Union	3,000	421	2,579	1,360	1,219
Warren	6,758	1,447	5,311	2,822	2,489
The State	139,255	27,040	112,215	59,884	52,331

POPULATION MAPS OF NEW JERSEY

The accompanying maps of New Jersey are based upon the United States Censuses for the years 1810, 1860, 1880, 1900 and 1920. The boundaries of the State, counties, townships and cities as of June 1, 1924, are shown in accordance with the "County and Municipality Map of New Jersey," published by the New Jersey Department of Conservation and Development, in 1924, which map was used beneath the original to assist in the proper localization of the symbols for 1920. The boundaries of the counties, townships and cities for the years 1900, 1880 and 1860 were ascertained by the use of the above mentioned map and the geological survey map of New Jersey prepared in 1888 by the State Geologist and the State Topographer. For the year 1810 the boundaries of counties and to some degree of townships were shown in accordance with the map, "The Province of New Jersey, Divided into East and West, commonly called 'The Jersey,'" engraved and published by William Faden, Charing Cross, December 1, 1777.

In preparing these population maps, it was intended first to follow the method employed by Sten DeGeer* and Guy-Harold Smith.** This method, through the use of different-sized sphere-like symbols to designate the cities and villages densely populated and the dots to represent the rural inhabitants and small urban communities, aims not only to show distribution of population but the concentration too. After a trial it was found that this method is excellent for the representation of a single year, but more or less inadequate for comparing several years, because it is very hard to visually compare the three-dimensional symbols of various sizes. The purpose of the New Jersey maps is to compare the growth and distribution of population since 1810. With this aim in mind, it was decided to use the dots and the series of various size circles. Each dot on the map represents 50 people localized by civil townships. If a city or village has a population of 2,500 or more, circles of more or less proportional size to the number of inhabitants are used. It is impossible to keep the area of the circles covering the actual area of the cities. But in making the maps attention was paid to locating a circle in the center of a town.

The year 1810 was taken as a starting point, because it was the first year in which the population of the State was enumerated by minor civil divisions. The period between 1810 and 1860 was omitted for

* "A Map of the Distribution of Population in Sweden: Method of Preparation and General Results," by Sten DeGeer, "The Geographical Review," Vol. 12, 1922, pp. 72-83.

** "A Population Map of Ohio for 1920," by Guy-Harold Smith, "The Geographical Review," Vol. XVIII, 1928, pp. 422-427.

two reasons, (1) to avoid complicating the maps and (2) because it was not until 1860 that the county boundaries were more or less definitely established.

The concentration of New Jersey's population near New York City and Philadelphia started in the 17th century. In 1810 it continued, and we see on the map two cities in Essex County, moderately dense rural habitation near New York City, and more or less thick population in proximity to Philadelphia along the Delaware River. In 1860 these two regions showed a remarkable increase in population. The scattered townships began to consolidate themselves into cities of large size. There were fourteen cities in proximity to New York, and the City of Camden grew rapidly in the Philadelphia district. At the same time the territory throughout the State was occupied by the moving population of the cities and by the immigrants. Since 1880 the populations of the counties located near New York City and Philadelphia have increased greatly. In 1920 the density of the population in Hudson County reached the mark of 14,632 inhabitants per square mile, and in Camden County 858 persons per square mile. Taking the total area of the State as equal to 8,224 square miles, we find the following number of inhabitants per square mile in the State: in 1810, 30; in 1860, 82; in 1880, 138; in 1900, 229, and in 1920, 384.

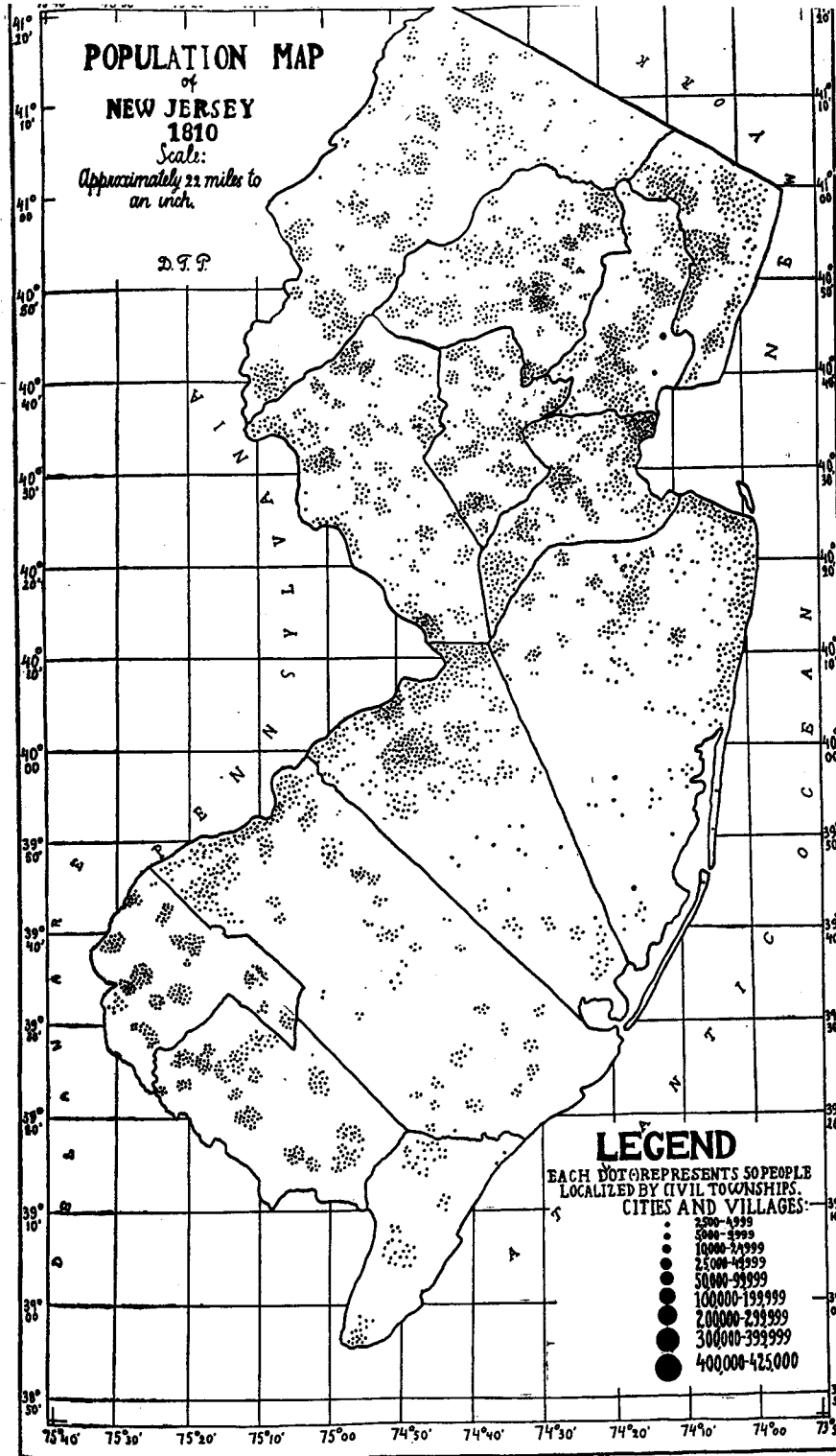
RAPID GROWTH OF CITIES

The number of cities grew rapidly, and in 1920 there were the following cities with 100,000 or more population: Newark, 414,524 inhabitants; Jersey City, 298,103; Paterson, 135,875; Trenton, 119,289, and Camden, 116,309. The cities with populations ranging in number from 25,000 to 100,000 inhabitants were in 1920 as follows: Elizabeth, 95,783 inhabitants; Bayonne, 76,754; Hoboken, 68,166; Passaic, 63,841; East Orange, 50,710; Atlantic City, 50,507; Perth Amboy, 41,707; West Hoboken, 40,074; Orange, 33,268; New Brunswick, 32,779; West New York, 29,926; Montclair, 28,810; Plainfield, 27,700; Kearny, 26,724; Clifton, 26,470, and Irvington, 25,480. The cities, towns and boroughs with populations ranging in number from 10,000 to 25,000 inhabitants were in 1920 as follows: Bloomfield, 22,019 inhabitants; Union, 20,651; Garfield, 19,381; Hackensack, 17,667; Phillipsburg, 16,923; Harrison, 15,721; Belleville, 15,660; West Orange, 15,573; Millville, 14,691; Bridgeton, 14,323; Long Branch, 13,521; Morristown, 12,548; Asbury Park, 12,400; Gloucester, 12,162; Englewood, 11,627; Roosevelt Borough, 11,047; Rahway, 11,042; and Summit, 10,174.

The places with populations ranging in number from 2,500 to 10,000 persons were in 1920 as follows: Rutherford, 9,497 inhabitants; Red Bank, 9,251; Burlington, 9,049; Collingswood, 8,714; Ridgefield Park, 8,575; South Amboy, 7,897; Ridgewood, 7,580; Salem, 7,435; Somerville, 6,718; Hammonton, 6,417; Princeton, 5,917; Bound Brook, 5,906; Roselle, 5,737; Cliffside Park, 5,709; Haddonfield, 5,646; Roselle Park, 5,438; Secaucus, 5,423; Boonton, 5,372; Hawthorne, 5,135; Highland Park, 4,866; Audubon, 4,740; Lambertville, 4,660; Carlstadt, 4,472; Raritan, 4,457; Keyport, 4,415; Bordentown, 4,371; Prospect Park, 4,292; Caldwell, 3,993; Bogota, 3,906; Bergenfield, 3,667; Haledon, 3,435; Cape May, 2,999; Leonia, 2,979; Haddon Heights, 2,950; Hackettstown, 2,936; Hasbrouck Heights, 2,895; Butler, 2,886; Little Ferry, 2,715; Hightstown, 2,674; Rockaway, 2,655, and Beverly, 2,562.

Therefore in 1920, 34.4 per cent of all the population lived in places of 100,000 or more inhabitants, 22.8 per cent in places of 25,000 to 100,000; 8.5 per cent in places of 10,000 to 25,000; 7.7 per cent in places of 5,000 to 10,000; 5.1 per cent in places 2,500 to 5,000 and 21.5 per cent in rural districts.

Monmouth, Ocean, Atlantic and Cumberland counties attracted the attention of visitors who spend the summer and fall in famous resorts located along the ocean. The visitors attracted merchants and business men who made these counties their permanent residence. The farmers too found that Monmouth and Cumberland counties are wonderfully suited to the cultivation of potatoes and various vegetables. So the number of people grew rapidly along the Atlantic coast, south of Union County. At the present time, the population of the State is growing rapidly and expanding in all directions.



Population Map of New Jersey 1810

PART II
FOOD SUPPLY IN NEW JERSEY

INTRODUCTION

There is only one reliable method for obtaining the actual amount of sales of various food commodities for a given period of time in the State or in a smaller community. This method involves enumeration of the amount of sales in all retail stores. Because the number of retail food stores in the State of New Jersey is estimated at 20,000, it is evident that the cost of such enumeration would be very high and, therefore, impractical. But there is a persistent demand from the farmers and the various business organizations for the figures on the quantity of sales of various food commodities within the State. To comply with this demand, it was found necessary to use an inexpensive method in obtaining the figures of the sales for the whole State. Although the method does not pretend to give absolutely true figures, yet it is hoped it furnishes more or less reasonable data.

According to the 1920 United States Census, out of the total New Jersey population of 3,155,900, the number of foreign-born was 738,613. Middlesex County had 30.31 per cent of foreign-born, *i. e.*, one of the highest in the State, and Cumberland County has 10.43 per cent foreign-born, *i. e.*, one of the lowest in the State. Middlesex County is located in the northern section of the State in the New York Metropolitan district, where the majority of people obtain their living by working in factories. Cumberland County is situated in the southern portion of the State in the heart of the farming district, where the inhabitants earn their living by tilling the soil and in the enterprises associated with agriculture. These two factors, namely, nativity of population and character of occupation, were laid out as the basis for our division of the State into two sections. The first section, in which the counties had in 1920 twenty or more per cent foreign-born and in which the people engage mostly in factory work, includes Bergen, Essex, Hudson, Mercer, Middlesex, Passaic, Somerset and Union counties. The second section, where the foreign-born population in 1920 was below twenty per cent and the occupation of the people is mostly agriculture, includes Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Monmouth, Morris, Ocean, Salem, Sussex and Warren counties. The City of South Amboy, situated in the northern portion of Middlesex County, was selected as representative of the first section, and the City of

Bridgeton, located in Cumberland County, was chosen as representative for the second section.

In the summer of 1929, the agents of this bureau visited all retail food stores in South Amboy and Bridgeton. The investigators enumerated the actual amount of sales of various food commodities during 1928 in forty-three stores in the City of South Amboy and ninety-seven stores in the City of Bridgeton, that is, in all the retail stores doing business in these two cities. The total population of South Amboy in 1928 was 9,000 persons, and in Bridgeton 19,075. Because Bridgeton is a trading center in Cumberland County, approximately 3,000 persons came from outside of the city boundary and bought certain manufactured commodities; therefore, some articles were sold not to 19,075 but to 22,075 people.

PER CAPITA SALES IN SOUTH AMBOY AND BRIDGETON IN 1928

The total amount of sales and per capita sales in these two cities in 1928 is given in the following table:

Commodity	Unit	City of South Amboy		City of Bridgeton	
		Total Sales in 1928	Per Capita Sales for the Year 1928	Total Sales in 1928	Per Capita Sales for the Year 1928
Bread	16 oz. loaf	466,894	51.88	1,777,180	80.50
Cakes	lbs.	35,050	3.89	262,002	11.87
Pies	"	23,634	2.63	86,716	3.93
Flour	"	297,268	33.03	925,539	41.93
Rice	"	36,209	4.02	94,038	4.26
Sugar	"	686,354	76.26	1,573,004	71.26
Coffee	"	100,928	11.21	216,857	9.82
Tea	"	17,833	1.98	14,149	0.64
Cocoa	"	5,749	0.64	15,265	0.71
Chocolate	"	2,852	0.32	3,075	0.14
Butter	"	176,828	19.65	230,558	12.09*
Substitutes for butter	"	25,146	2.79	119,928	5.43
Eggs	doz.	103,322	11.48	168,680	8.84*
Cheese	lbs.	37,023	4.11	104,785	4.75
Meats	"	524,220	58.25	1,731,101	78.42
Lard	"	83,256	9.25	270,453	12.25
Vegetable oils	"	6,370	0.71	11,176	0.51
White potatoes	bu.	11,593	1.29	20,280	1.06*
Sweet potatoes	"	662	0.07	1,586	0.083*
Apples	"	7,324	0.81	6,984	0.37*
Peaches, fresh	"	785	0.087	5,915	0.31*
Cranberries, fresh	lbs.	2,987	0.33	18,825	0.85
Pears, fresh	"	6,113	0.68	8,700	0.46*
Pears, canned	cans	19,062	2.12	10,337	0.47
Cucumbers, fresh	bu.	303	0.03	800	0.042*
Watermelons	No. of melons	1,626	0.18	11,100	0.58*
Eggplants	bu.	120	0.013	620	0.033*
Grapes	lbs.	12,484	1.39	79,262	4.16*
Tomatoes, fresh	"	35,662	3.96	223,456	11.71*

Tomatoes, canned	cans	48,770	5.42	122,442	5.55
Tomato soup	"	48,316	5.37	39,868	1.81
Sweet corn, fresh	ears	14,367	1.60	174,344	9.14*
Corn, canned	cans	37,882	4.21	104,960	4.75
Strawberries, fresh	qts.	37,700	4.19	46,943	2.46*
Strawberries, canned	cans	1,380	0.15	1,894	0.09
String beans, fresh	bu.	376	0.042	845	0.044*
String beans, canned	cans	16,904	1.88	29,914	1.36
Asparagus	bchs.	3,748	0.42	13,210	0.69*
Asparagus, canned	cans	8,126	0.90	10,673	0.56*
Peppers	bu.	441	0.049	2,831	0.15*
Onions	lbs.	95,022	10.56	175,510	9.20*
Lettuce	heads	27,934	3.10	121,167	6.35*
Celery	bunches	20,337	2.26	72,357	3.79*
Spinach, fresh	bu.	1,670	0.19	1,310	0.07*
Spinach, canned	cans	9,719	1.08	18,394	0.83
Carrots	bu.	1,734	0.20	446	0.023*
Beets	"	934	0.10	548	0.029*
Cabbage	"	1,678	0.19	4,211	0.22*
Cauliflower	heads	6,337	0.70	6,366	0.33*
All kinds of canned soups	cans	39,088	4.34	92,636	4.20
Cantaloupes	No. of melons	11,133	1.24	45,840	2.40*
Lima beans, fresh	bu.	216	0.024	1,015	0.04*
Lima and navy beans, canned	cans	58,404	6.49	173,893	7.88
Green peas, fresh	lbs.	8,888	0.99	37,603	1.97*
Green peas, canned	cans	48,460	5.38	111,804	5.06
Oranges	No. of oranges	484,670	53.85	1,092,396	49.49
Lemons	No. of lemons	98,274	10.92	409,032	18.53
Milk, 3.5 per cent	quarts	1,095,000	121.66	1,642,500	86.11*
Peaches, canned	cans	22,078	2.45	60,481	2.74
Cranberries, canned	"	6,332	0.70	5,741	0.26

* Those with * represent sales to 22,075 people, those without * represent sales to 19,075 people.

VALUE FACTORS OF ADULT MALE

Because per capita sales are to some extent misleading, it was found advisable to give the sales per one male adult. In order to find out the number of adult males equivalent to all the population in these two cities, the following man's value factors were used:

Age in Years and Sex	Adult Male Value Factor
Total under 7 years, males and females	0.55
Total 7 to 13 inclusive, males and females	0.72
Total 14 to 20 inclusive, males and females	0.92
Total 21 and over, males	1.00
Total 21 and over, females	0.83

These adult male value factors are taken in a slightly modified form from Professor Raymond Pearl's book entitled "Studies in Human Biology" (page 415).

As it is evident from the following table, the adult male equivalent for the City of South Amboy in 1928 was 7,471, and for the City of Bridgeton without outside buyers 16,165 and with outside buyers 18,707.

TOTAL POPULATION BY AGE AND SEX IN 1920 AND 1928. AND ADULT MALE EQUIVALENT IN SOUTH AMBOY AND BRIDGETON

	South Amboy	
	Total in 1920	Per Cent of Total
Total males and females under 7 years of age.	1,258	15.93
Total males and females 7 to 13 years of age.	1,105	15.13
Total males and females 14 to 20 years of age.	1,064	13.47
Total males 21 years and over	2,282	28.90
Total females 21 years and over	2,098	26.57
Totals	7,897	100

	Population in 1928	Adult Male Equivalent in 1928
Total males and females under 7 years of age.	1,433	788
Total males and females 7 to 13 years of age.	1,361	980
Total males and females 14 to 20 years of age.	1,213	1,116
Total males 21 years and over	2,602	2,602
Total females 21 years and over	2,391	1,985
Totals	9,000	7,471

(Continued on Page 42)

Bridgeton

	Total in 1920	Per Cent of Total	Population in 1928	Adult Male Equivalent in 1928	Adult Male Equivalent with Suburbs
Total males and females under 7 years of age	1,708	11.93	2,276	1,252	1,449
Total males and females 7 to 13 years of age	1,659	11.58	2,209	1,590	1,840
Total males and females 14 to 20 years of age	1,644	11.48	2,190	2,015	2,331
Total males 21 years and over	4,488	31.33	5,976	5,976	6,916
Total females 21 years and over	4,824	33.68	6,424	5,332	6,171
Totals	14,323	100	19,075	16,165	18,707

SALES PER MALE ADULT IN SOUTH AMBOY AND BRIDGETON

Commodity	Unit	Sales per Male Adult in 1928	
		South Amboy	Bridgeton
Bread	16-oz. loaf	62.49	95.00
Cakes	lbs.	4.69	14.00
Pies	"	3.16	4.64
Flour	"	39.79	49.48
Rice	"	4.85	5.03
Sugar	"	105.25	84.09
Coffee	"	13.51	11.59
Tea	"	2.39	0.76
Cocoa	"	0.77	0.82
Chocolate	"	0.38	0.16
Butter	"	23.67	14.26
Substitute for butter	"	3.37	6.41
Eggs	doz.	13.83	10.43
Cheese	lbs.	4.96	5.60
Meats	"	70.17	92.54
Lard	"	11.14	14.46
Vegetable oils	"	0.85	0.62
White potatoes	bu.	1.55	1.25
Sweet potatoes	"	0.09	0.098
Apples	"	0.97	0.43
Peaches, fresh	"	0.11	0.37
Cranberries, fresh	lbs.	0.40	1.01
Pears, fresh	"	0.82	0.54
Pears, canned	cans	2.55	0.55
Cucumbers, fresh	bu.	0.04	0.049
Watermelons	No. of melons	0.22	0.69
Eggplants	bu.	0.016	0.038
Grapes	lbs.	1.67	4.90
Tomatoes, fresh	"	4.77	13.82
Tomatoes, canned	cans	6.53	6.54
Tomato soup	"	6.47	2.13

(Continued on Page 43)

Commodity	Unit	Sales per Male Adult in 1928	
		South Amboy	Bridgeton
Sweet corn, fresh	ears	1.92	10.79
Corn, canned	cans	5.07	5.61
Strawberries, fresh	qts.	5.05	2.90
Strawberries, canned	cans	0.18	0.10
String beans, fresh	bu.	0.05	0.052
String beans, canned	cans	2.26	1.60
Asparagus	bchs.	0.50	0.82
Asparagus, canned	cans	1.09	0.66
Peppers	bu.	0.059	0.18
Onions	lbs.	12.72	10.86
Lettuce	heads	3.74	7.50
Celery	bunches	2.72	4.48
Spinach, fresh	bu.	0.22	0.08
Spinach, canned	cans	1.30	0.98
Carrots	bu.	0.23	0.028
Beets	"	0.13	0.034
Cabbage	"	0.22	0.26
Cauliflower	heads	0.85	0.39
All kinds of canned soups	cans	5.25	4.95
Cantaloupes	No. of melons	1.49	2.85
Lima beans, fresh	bu.	0.029	0.062
Lima and navy beans, canned	cans	7.82	9.30
Green peas, fresh	lbs.	1.19	2.33
Green peas, canned	cans	6.49	5.98
Oranges	No. of oranges	64.87	58.40
Lemons	No. of lemons	13.15	21.87
Milk, 3.5 per cent	qts.	146.56	101.61
Peaches, canned	cans	2.96	3.23
Cranberries, canned	"	0.85	0.31

As it was pointed out the population of the State was divided into two sections. In 1928, as it is given in the following table, the total population in the first section was 2,724,649 persons and in the second section 932,351, the total being 3,657,000. Reduced to adult male equivalents, the population in the first section was 2,269,723 persons and in the second section 784,195, the total being 3,053,918.

TOTAL POPULATION IN NEW JERSEY IN 1928 ACCORDING TO AGE AND SEX AND THE NUMBER OF ADULT MALE EQUIVALENTS

County	Total Population in 1928	Total—Male and Female					
		Under 7 Years of Age			7 to 13 Years, Inclusive		
		Per Cent of Total	Total Number	Multiplied by 0.55 Adult Male Factor	Per Cent of Total	Total Number	Multiplied by 0.72 Adult Male Factor
Atlantic	93,550	12.36	11,563	6,360	12.66	11,843	8,527
Bergen	268,291	15.36	41,208	22,664	14.61	39,196	28,221
Burlington	93,986	13.63	12,810	7,046	12.26	11,523	8,297
Camden	229,576	14.90	34,207	18,814	13.26	30,442	21,918
Cape May	19,213	12.82	2,463	1,355	12.84	2,467	1,776
Cumberland	66,366	12.67	8,409	4,625	13.65	9,059	6,522
Essex	766,635	14.44	110,702	60,886	13.19	101,119	72,806
Gloucester	57,017	14.64	8,347	4,591	13.11	7,475	5,382
Hudson	703,312	15.57	109,506	60,228	13.71	96,424	69,425
Hunterdon	32,331	12.35	3,993	2,196	12.08	3,906	2,812
Mercer	187,502	15.09	28,294	15,562	13.20	24,750	17,820
Middlesex	201,139	18.80	37,814	20,798	14.89	29,950	21,564
Monmouth	113,180	12.50	14,148	7,781	12.78	14,464	10,414
Morris	89,066	13.47	11,997	6,598	12.77	11,374	8,189
Ocean	22,833	11.13	2,541	1,398	13.23	3,021	2,175
Passaic	293,975	15.20	44,684	24,576	14.02	41,215	29,675
Salem	44,276	14.75	6,531	3,592	13.14	5,818	4,189
Somerset	55,370	15.24	8,438	4,641	13.81	7,647	5,506
Sussex	24,385	14.99	3,655	2,010	12.64	3,082	2,219
Union	248,425	16.17	40,170	22,094	13.85	34,407	24,773
Warren	46,572	14.71	6,851	3,768	12.81	5,966	4,296
The State	3,657,000	14.99	548,331	301,583	13.54	495,148	356,506

(Continued on Page 45)

TOTAL POPULATION IN NEW JERSEY IN 1928 ACCORDING TO AGE AND SEX AND THE NUMBER OF ADULT MALE EQUIVALENTS—Continued

County	Total—Male and Female			Male			Female		
	14 to 20 Years, Inclusive			21 Years and Over			21 Years and Over		
	Per Cent of Total	Total Number	Multiplied by 0.92 Adult Male Factor	Per Cent of Total	Total Number	Multiplied by 1.00 Adult Male Factor	Per Cent of Total	Total Number	Multiplied by 0.83 Adult Male Factor
Atlantic	10.57	9,888	9,097	31.13	29,122	29,122	33.28	31,134	25,841
Bergen	11.65	31,259	28,758	29.27	78,528	78,528	29.11	78,100	64,823
Burlington	11.96	11,241	10,342	33.42	31,410	31,410	28.73	27,002	22,412
Camden	11.34	26,034	23,951	30.90	70,939	70,939	29.60	67,954	56,402
Cape May	10.95	2,104	1,936	32.59	6,262	6,262	30.80	5,917	4,911
Cumberland	12.58	8,349	7,681	30.32	20,122	20,122	30.78	20,427	16,954
Essex	11.24	86,170	79,276	30.13	230,987	230,987	31.00	237,657	197,255
Gloucester	10.87	6,198	5,702	31.23	17,806	17,806	30.15	17,191	14,269
Hudson	11.78	82,850	76,222	30.38	213,666	213,666	28.56	200,866	166,719
Hunterdon	10.92	3,531	3,249	32.23	10,420	10,420	32.42	10,487	8,699
Mercer	11.17	20,944	19,268	31.25	58,594	58,594	29.29	54,920	45,584
Middlesex	11.07	22,266	20,485	29.62	59,577	59,577	25.62	51,532	42,772
Monmouth	11.45	12,959	11,922	30.86	34,927	34,927	32.41	36,682	30,446
Morris	10.68	9,512	8,751	31.48	28,038	28,038	31.60	28,145	23,360
Ocean	11.30	2,580	2,374	31.40	7,170	7,170	32.94	7,521	6,242
Passaic	12.02	35,336	32,509	29.50	86,723	86,723	29.26	86,017	71,394
Salem	11.39	5,043	4,640	32.40	14,345	14,345	28.32	12,539	10,407
Somerset	11.06	6,124	5,634	30.40	16,832	16,832	29.49	16,329	13,553
Sussex	10.29	2,509	2,308	32.92	8,028	8,028	29.16	7,111	5,902
Union	10.64	26,432	24,317	29.96	74,428	74,428	29.38	72,988	60,580
Warren	10.77	5,016	4,615	31.44	14,642	14,642	30.27	14,097	11,701
The State	11.38	416,345	383,037	30.42	1,112,566	1,112,566	29.67	1,084,610	900,226

TOTAL NEW JERSEY SALES

Weighting the number of adult male equivalents of the first section, that is, 2,269,723, by the sales per adult male in South Amboy, and again weighting the number of the adult male equivalents of the second section, that is, 784,195, by the sales per adult male in Bridgeton, we get the following total sales for the State in 1928.

Commodity	Unit	First Section of the State Total Sales	Second Section of the State Total Sales	State Total
Bread	16-oz. loaf	141,834,990	74,498,525	216,333,515
Cakes	lbs.	10,645,001	10,978,730	21,623,731
Pies	lbs.	7,172,325	3,638,665	10,810,990
Flour	lbs.	90,312,278	38,801,969	129,114,247
Rice	lbs.	11,008,157	3,944,501	14,952,658
Sugar	lbs.	238,888,346	65,942,958	304,831,304
Coffee	lbs.	30,663,958	9,088,820	39,752,778
Tea	lbs.	5,424,638	595,988	6,020,626
Cocoa	lbs.	1,747,687	643,040	2,390,727
Chocolate	lbs.	862,495	125,471	987,966
Butter	lbs.	53,724,343	11,182,621	64,906,964
Substitutes for butter	lbs.	7,648,967	5,026,690	12,675,657
Eggs	doz.	31,390,269	8,179,154	39,569,423
Cheese	lbs.	11,257,826	4,391,492	15,649,318
Meats	lbs.	159,266,463	72,569,405	231,835,868
Lard	lbs.	25,284,714	11,339,460	36,624,174
Vegetable oils	lbs.	1,929,265	486,201	2,415,466
White potatoes	bu.	3,518,071	980,244	4,498,315
Sweet potatoes	bu.	204,275	76,851	281,126
Apples	bu.	2,201,631	337,204	2,538,835
Peaches, fresh	bu.	249,670	290,152	539,822
Cranberries, fresh	lbs.	907,889	792,037	1,699,926
Pears, fresh	lbs.	1,861,173	423,465	2,284,638
Pears, canned	cans	5,787,794	431,307	6,219,101
Cucumbers, fresh	bu.	90,789	38,426	129,215
Watermelons	No. of melons	499,339	541,095	1,040,434
Eggplants	bu.	36,316	29,799	66,115
Grapes	lbs.	3,790,437	3,842,556	7,632,993
Tomatoes, fresh	lbs.	10,826,579	10,837,575	21,664,154
Tomatoes, canned	cans	14,821,291	5,128,635	19,949,926
Tomato soup	cans	14,685,108	1,670,335	16,355,443
Sweet corn, fresh	ears	4,357,868	8,461,464	12,819,332
Corn, canned	cans	11,507,496	4,399,334	15,906,830
Strawberries, fresh	qts.	11,462,101	2,274,166	13,736,267
Strawberries, canned	cans	408,550	78,420	486,970
String beans, fresh	bu.	113,486	40,778	154,264
String beans, canned	cans	5,129,574	1,254,712	6,384,286
Asparagus, fresh	bchs.	1,134,862	643,040	1,777,902
Asparagus, canned	cans	2,473,998	517,569	2,991,567
Peppers	bu.	133,914	141,155	275,069
Onions	lbs.	28,870,877	8,516,358	37,387,235
Lettuce	heads	8,488,764	5,881,463	14,370,227
Celery	bchs.	6,173,647	3,513,194	9,686,841
Spinach, fresh	bu.	499,339	62,736	562,075
Spinach, canned	cans	2,950,640	768,511	3,719,151
Carrots	bu.	522,036	21,957	543,993
Beets	bu.	295,064	26,663	321,727
Cabbage	bu.	499,339	203,891	703,230

(Continued on Page 47)

Commodity	Unit	First Section of the State Total Sales	Second Section of the State Total Sales	State Total
Cauliflower	hds.	1,929,265	305,836	2,235,101
All kinds of canned soups	cans	11,916,046	3,881,765	15,797,811
Cantaloupes	No. of melons	3,381,887	2,227,114	5,609,001
Lima beans, fresh	bu.	65,822	48,620	114,442
Lima and navy beans, canned	cans	17,749,234	7,293,014	25,042,248
Green peas, fresh	lbs.	2,700,970	1,827,174	4,528,144
Green peas, canned	cans	14,730,502	4,689,486	19,419,988
Oranges	number	147,236,931	45,796,988	193,033,919
Lemons	number	29,846,857	17,150,345	46,997,202
Milk, 3.5 per cent.*	qts.	332,650,603	79,682,054	412,332,657
Peaches, canned	cans	6,718,380	2,532,950	9,251,330
Cranberries, canned	cans	1,929,265	243,100	2,172,365

* Sold by all agencies.

Dividing the State total sale of each commodity by 3,657,000, which is the State's population, we receive the average per capita sale of each commodity in the State, and again dividing the State total sale of each commodity by 3,053,918, we get the average per adult male sale of each commodity in the State.

PER CAPITA AND PER ADULT MALE SALES IN NEW JERSEY IN 1928

Commodity	Unit	Sales per Capita	Sales per Adult Male
Bread	16-oz. loaf	59.2	70.8
Cakes	lbs.	5.9	7.1
Pies	lbs.	2.95	3.5
Flour	lbs.	35.3	42.3
Rice	lbs.	4.1	4.9
Sugar	lbs.	83.4	99.8
Coffee	lbs.	10.9	13.0
Tea	lbs.	1.64	2.0
Cocoa	lbs.	0.65	0.8
Chocolate	lbs.	0.27	0.3
Butter	lbs.	17.7	21.3
Substitute for butter	lbs.	3.5	4.2
Eggs	doz.	10.8	13.0
Cheese	lbs.	4.3	5.1
Meats	lbs.	63.4	75.9
Lard	lbs.	10.0	12.0
Vegetable oils	lbs.	0.7	0.8
White potatoes	bu.	1.2	1.5
Sweet potatoes	bu.	0.08	0.09
Apples	bu.	0.7	0.8
Peaches, fresh	bu.	0.15	0.2
Cranberries, fresh	lbs.	0.46	0.6
Pears, fresh	lbs.	0.62	0.7
Pears, canned	cans	1.7	2.04
Cucumbers, fresh	bu.	0.035	0.04
Watermelons	No. of melons	0.28	0.34
Eggplant	bu.	0.018	0.02

Commodity	Unit	Sales per Capita	Number of Sales per Adult Male
Grapes	lbs.	2.1	2.5
Tomatoes, fresh	lbs.	5.9	7.1
Tomatoes, canned	cans	5.5	6.5
Tomato soup	cans	4.5	5.4
Sweet corn, fresh	ears	3.5	4.2
Corn, canned	cans	4.4	5.2
Strawberries, fresh	qts.	3.8	4.5
Strawberries, canned	cans	0.13	0.16
String beans, fresh	bu.	0.04	0.05
String beans, canned	cans	1.75	2.1
Asparagus, fresh	bchs.	0.5	0.6
Asparagus, canned	cans	0.82	0.98
Peppers	bu.	0.075	0.09
Onions	lbs.	10.2	12.2
Lettuce	heads	3.9	4.7
Celery	bchs.	2.65	3.2
Spinach, fresh	bu.	0.15	0.18
Spinach, canned	cans	1.0	1.2
Carrots	bu.	0.15	0.18
Beets	bu.	0.09	0.11
Cabbage	bu.	0.19	0.23
Cauliflower	hds.	0.61	0.73
All kinds of canned soups	cans	4.3	5.2
Cantaloupes	No. of melons	1.53	1.84
Lima beans, fresh	bu.	0.03	0.04
Lima and navy beans, canned	cans	6.8	8.2
Green peas, fresh	lbs.	1.2	1.5
Green peas, canned	cans	5.3	6.4
Oranges	number	52.8	63.2
Lemons	number	12.9	15.4
Milk, 3.5 per cent.	qts.	112.8	135.0
Peaches, canned	cans	2.5	3.03
Cranberries, canned	cans	0.6	0.7

Besides the retail stores there are in New Jersey other avenues through which food commodities pass to the consumers' hands. Among these avenues the roadside markets, the peddlers and the sales by the farmers directly to the consumers are prominent. Studies of the quantity of food commodities sold by the roadside markets in the State are going on, and in the near future it is expected to have the figures tabulated. The quantity of sales on roadside markets is quite large, and the quantity sold by peddlers and farmers directly to consumers is considerably less. So when the figures of sales on roadside markets are available, it will be possible to arrive at the approximate total sales in the State. In this study the figures represent the quantities sold by retail stores only.

In the following table an attempt is made to compare the quantity of different food commodities produced in the State with the quantity sold by the retail stores. New Jersey does not produce enough wheat to feed its population. Almost all the wheat and corn produced in

New Jersey are fed to domestic animals. New Jersey also depends almost entirely on other states for its supply of all meats, except poultry, butter, cheese, etc. Because the value of the land in the State is high, the farmers employ an intensive method of cultivation and produce those commodities which give a high return per acre, namely, vegetables and fruits.

COMPARISON BETWEEN THE QUANTITY OF DIFFERENT FOOD COMMODITIES PRODUCED IN NEW JERSEY AND SOLD BY THE RETAIL STORES WITHIN THE STATE IN 1928

Commodity	Unit	Five-Year Average Production in New Jersey (1924-1928)	Quantity Sold by Retail Stores in New Jersey in 1928	Difference Between Production and Retail Stores' Sales; Sign + Means Surplus; Sign - Means Shortage
Eggs	doz.	29,000,000	39,569,423	-10,569,423
White potatoes	bu.	8,225,000	4,498,315	+3,726,685
Sweet potatoes	bu.	2,100,000	281,126	+1,818,874
Apples	bu.	3,151,000	2,538,835	+612,165
Peaches, fresh	bu.	2,234,000	539,822	+1,694,178**
Cranberries, fresh	lbs.	15,100,000	1,699,926	+13,300,074**
Pears, fresh	lbs.	31,395,000	2,284,638	+29,110,362**
Cucumbers, fresh	bu.	397,800	129,215	+268,585
Watermelons	No. of melons	698,000	1,040,434	-342,434
Eggplant	bu.	293,000	66,115	+226,885
Tomatoes, fresh	lbs.	151,827,000	21,664,154	+130,162,846
Sweet corn	ears	113,870,000	12,819,332	+101,050,668
Strawberries, fresh	qts.	12,083,000	13,736,267	-1,653,267
String beans, fresh	bu.	1,358,800	154,264	+1,204,536
Asparagus, fresh	bchs.	6,336,000	1,777,902	+4,558,098**
Peppers	bu.	1,809,200	275,069	+1,534,131
Onions	lbs.	35,805,000	37,387,235	-1,582,235
Lettuce	heads	25,388,000	14,370,227	+11,017,773
Celery	bchs.	13,394,000	9,686,841	+3,707,159
Spinach, fresh	bu.	1,220,030	562,075	+657,955
Carrots	bu.	344,200	543,993	-199,793
Beets	bu.	229,500	321,727	-92,227
Cabbage	bu.	1,523,000	703,230	+819,770
Cantaloupes	No. of melons	9,952,000	5,609,001	+4,342,999
Lima beans, fresh	bu.	253,000	114,442	+138,558
Green peas, fresh	lbs.	8,975,000	4,528,144	+4,446,856**
Milk, 3.5 per cent.	qts.	250,000,000	412,332,657*	-162,332,657
Cauliflower	heads	667,200	2,235,101	-1,567,901

* Sold by all agencies.

** Quantity canned is not subtracted.

We emphasize again that the above given figures do not represent the total quantity of food commodities sold within the State of New Jersey. The figures show the approximate quantity sold by retail stores in the State.