“almost totally destroyed by the great sickness”
(c. 13,000 BC to 1603 and 1604 to 1726)

[The] Pawtuckett . . . were also a considerable people heretofore, about three thousand men; and held amity with the people of Massachusetts. But these also were almost totally destroyed by the great sickness before mentioned; so that at this day, they are not above two hundred and fifty men, besides women and children. This country is now inhabited by the English under the government of Massachusetts. Daniel Gookin

This first article in the series discusses the earliest inhabitants of present-day Lowell, Massachusetts from the first Paleo-Indians to the Pawtucket Indians, to the arrival of the first Europeans, through the epidemics, through the wars and ethnic cleansing, to the diaspora that followed, and ending, in 1726, the year that Wamesit was annexed to Chelmsford. There will be a focus on the epidemic diseases that infected the Indian communities who lived in this region between 1616 and 1634, and on the interpretations of these diseases by the settlers, chroniclers, historians, scientists, and others.

In the seventeenth century, the early writers’ beliefs, superstitions, prejudices, and cultural biases distorted the realities of the Indians’ lives and the causes of their fate. In the eighteenth to late twentieth centuries, historians and others reinterpreted the available information sometimes with more appreciation of and empathy for the Indians, but still with the belief that the final result was inevitable. Modern writers have the advantages of hindsight, decades of historical research, archeological investigations, scientific understandings of health and disease, and many others advantages of discoveries in the social, physical, and life sciences. In spite of these, however, there is still often a reluctance to recognize that a different outcome was possible.

It will be argued in this chapter that the pathogens that caused the diseases were not the sole cause of the depopulation of these Indians during the years of the great sickness. Kidnappings, killings, wars, and other damaging social, biological, and psychological factors precipitated by the European traders, explorers, and settlers acted and interacted to cause the devastation and exacerbated the effects of the diseases on the Indians.
The Indians were not totally destroyed by the great sickness; there was a significant population who survived. These survivors were mistreated, marginalized, cheated, harassed, forcibly moved, sold into slavery, and killed until those who still managed to survive trekked north to live with other Indian communities in northern Maine and Canada. It was not all of the European settlers in this area who caused the depopulation and diaspora. Some of the Europeans who settled in Boston and other parts of this region were determined to remove the inhabitants and claim the land for their own. The extreme actions of a few escalated the violence and overwhelmed the efforts of others for coexistence.

I have divided the timeframe of this chapter into four periods, with the Contact Period (circa 1604 to 1726) divided into three periods:

Pre-contact (circa 13,000 BC to circa 1604),
First Contact (circa 1604 to 1616),
Contact: Epidemics (1616 to 1634),
Contact: Wars, Ethnic Cleansing, Diaspora (1634 to 1726).

The beginning and ending dates for these periods are for the Pawtucket and Wamesit Indian communities who lived along the Merrimack River in what is now Greater Lowell. The dates for other communities in New England would be different.

There are significant gaps in the historic record of this period, and surviving artifacts and documents only tell part of the story. There are many reasons for the lack of details available for study.

First of all, we are looking at events that happened more than three and four centuries ago. Secondly, the takeover of the land by European settlers and farmers was rapid and pervasive; the land where the Indians lived, farmed, and fished was the land the settlers wanted most. Thirdly, the area’s often wet climate, the four seasons with large temperature variations, the acidic soil, and the flooding and freshets of the rivers left only highly durable artifacts. Fourth, there was a total lack of interest on the part of the Europeans for preserving anything to do with the Indians. Fifth, the canal and mill building in the nineteenth century was even more rapid and pervasive than the earlier agricultural
development. Sixth, the Indians altered but did not make deep and lasting marks on the landscape.

In spite of these factors, we do have some history, and the historians and others who have studied the Indians in New England have done a lot of great work with what there is. This chapter and the bibliographic essay for this chapter mention many of these efforts.

So little is known about the Pawtucket, I will sometimes rely on descriptions of other groups of Indians in that time and that area who shared similar lifeways. The Indians in this area were both apart from and connected to neighboring communities, but certainly shared similar ways of living.

The vestiges of these early inhabitants of what we now call Lowell exist in place names and street names that are interesting, enduring, and poetic. They also exist in some documents, artifacts, and stories that tell part of the history. The monuments and historic markers are few, but serve as tributes and reminders. Behind the names, documents, artifacts, monuments, and markers are interesting stories and lessons.

Pre-contact (circa 13,000 BC to circa 1604)

The ancestors of the Indians crossed the Bering Land Bridge (Beringia) about 15,000 years ago (many estimates fall in the range of 16,500 to 13,000 years ago). It was certainly more than 12,000 years ago, as that is when the land bridge disappeared. The bridge was about 1,000 miles wide 21,000 years ago, when the oceans were 400 feet lower than they are today. While enough of the earth’s water was frozen in glaciers to cause this lower ocean level, Beringia was glacier-free. Beginning about 21,000 years ago the glaciers started to melt, ocean levels rose, and the land bridge disappeared under water.

Starting in Western Beringia, or Siberia, successive bands of 20 to 60 human beings each crossed Beringia following the big game animals or megafauna including the giant beaver, steppe bison, shrub-ox, mastodon, woolly mammoth, and early caribou. Using 15,000 years ago as a time of the crossing, and using 25 years as the time span for one generation, the Indians in North and South America were isolated from the Eurasian population for 600 generations. These people stayed in what is now Alaska and western
Canada (Eastern Beringia) until glaciers receded about 12,000 years ago then, numbering only a few thousand souls, fanned out across North and South America.

In 2014, the “Beringia Standstill Hypothesis” proposed that the ancestors left Siberia 25,000 years ago and lived on Beringia for 10,000 years before entering Alaska and Canada. This would mean that the Indians in the Americas separated from the Eurasians 10 millennia earlier than stated above, and that they were isolated from them for 1000 generations.

The Paleo-Indians’ expansion in both population and geographical range was rapid. Some of these people walked towards the east and arrived in what centuries later would be called New England. There might have been as many as 25,000 Paleo-Indians in the New England area 10,000 years ago. Climate change on the continent led to the disappearance of the big game animals, and the Paleo-Indians in the New England area either merged with or disappeared and were replaced by later waves migrating of Indians from the west and southwest to this area.

The names of the Indian communities

The Pennacook were a confederacy of an estimated 12 to 30 allied communities in the vicinity of New Hampshire, northeastern Massachusetts, and southern Maine. Here, I use the term “communities” for these groups. Although the terms tribes, villages, and bands are also used, they can be misleading. “Tribes” can imply larger, more distinct, and more disconnected groups. “Villages” does not convey the shared spirituality and beliefs within the groups, the consanguinity or kinship of the groups, or their seasonal movement. And “bands” connotes a more nomadic hunter-gatherer lifestyle than these groups experienced.

The alliances between communities were both important and changing, with intermarriage, communication, movement, trading, and other types of reciprocity between them. Part of the process of trying to understand them involves recognizing the balance of dependence and independence of the communities.

The Pennacook spoke an Algonquian language; however, the Pennacook were more closely related in other ways to Abenaki tribes to the north, east, and west, than to the Algonquian tribes to the south. The Pawtucket, who lived along the Merrimack River in
New Hampshire and northeastern Massachusetts, were one of these 12 to 30 allied Pennacook communities.

For the purposes here, at the time right before the epidemics, I consider the Pawtucket allied with, but in other ways independent from, other Pennacook communities. Other Pennacook communities were the Accominta, Agawam, Nashaway (sometimes considered Nipmuc and not Pennacook), Naticook, Naumkeag, Pentucket, Piscataqua, Souhegan, Squamsauke, Wachusetts, and Winnipesaukee, though this list is not complete or definitive.

Different sources combine, divide, and define these groups in different ways, and differ from what I have presented above. My systemization is based on what made the most sense to me based on the materials I read.

There are a number of reasons why there are different interpretations of the names of, and relationships between, Indian communities. Early writers often mixed up the names of groups of Indians, used names interchangeably, and/or combined two or more groups into one. A variety of spellings of names adds to the uncertainty. In addition, the Indians did not refer to themselves by many of the names used by the early fishermen, trappers, traders, explorers, settlers, and later historians.

Concern with the nomenclature of the communities, groups, tribes, or villages is important, but can also be misleading. Names allow us to frame things in our minds; however, because names are primarily influenced by our culture, they might also limit or restrict our understandings. Any attempts to define Indian communities in the Merrimack Valley with names might paradoxically keep us from understanding the people within them.

Another problem has been with later writers trying to fit the more recent and familiar model of the larger, more distinct Western Indian tribes to describe Indian groupings in the Northeast, especially the region being discussed. Some groups of Indians in New England were more distinct and less fluid (i.e., more “tribal”) than the Pennacook; however, in many cases the tribal model does not represent the Indian communities in New England.

Any map of Indian communities in New England should be considered a snapshot in time and is subject to the same problems with naming mentioned above. Also, groups within the Pennacook confederacy, like the Pawtucket, moved seasonally. They were not
nomadic, hunter-gatherers, or even semi-nomadic (i.e., largely nomadic but who planted some crops in a specific area). These communities were seasonally semisedentary (i.e., moving to specific locations according to the seasons). Even with this movement, their ties to specific areas of the land were strong. They were no more “nomadic” than a modern family with a home in the Boston suburbs, and a summer cabin on a lake in New Hampshire.

The population numbers

There is a wide range of estimates of the human population in North and South America before European contact. Many estimates are between 30 million to 50 million people in North and South America combined, and two million to 18 million in North America. An estimate of 150,000 Indians in New England before the first European-introduced epidemics seems reasonable.

In 1674, Daniel Gookin estimated pre-epidemic populations for what he called the five “principal nations of the Indians, that did, or do, inhabit within the confines of New England.” He referred to these five nations as the “Pequots,” the “Narragansitts,” the “Pawkunnawkutts,” the “Massachusetts,” and the “Pawtucketts.”

Gookin, referring to the Pawtucket (I believe that Gookin was referring to the Pennacook Confederacy including the Pawtucket, and not just the Pawtucket), estimated that there were 3,000 men before the first epidemic. If we take the number of 3,000 men and multiply it by five to eight for the total population, there was an estimated 15,000 to 24,000 people in Pennacook communities before 1616.

To continue speculation for the Pawtucket population numbers, we could take the number 24,000 and divide by the number of estimated communities in the Pennacook Confederacy (12 to 30) and arrive at a range of 800 to 2,000 people living in this area before 1616. The Pawtucket was likely one of the larger Pennacook communities, so it can also be speculated that the numbers were at or above the high end of this range.

In addition, the Pawtucket’s area was important to many other Indian communities at certain times of the year. Mainly because of the excellent fishing, Pawtucket Falls became a major gathering spot for the Pennacook and possibly others during the upriver and downriver fish migrations. Another speculation of mine is that Gookin referred to the
Pennacook as the Pawtucket because of these large seasonal gatherings at Pawtucket Falls, where he was a visitor at certain times.

Lifeways

The early chroniclers who best describe the New England Indians and their lifeways were John Smith and Samuel de Champlain who observed them before the epidemics, and William Wood, John Josselyn, and Daniel Gookin, who observed them and wrote after the epidemics. Below, quoted at some length, are some of the observations of Wood, Gookin, and Smith.

In 1634, William Wood wrote that

[their] employments be many; First their building of houses, whose frames are formed like our garden-arbors, something more round, very strong and handsome, covered with close-wrought mats of their owne weaving, which deny entrance to any drop of raine, though it come both fierce and long, neither can the piercing North winde find a crannie through which he can convey his cooling breath. They be warmer than our English houses; at the top is a square hole for the smoakes evacuation, which in rainy weather is covered with a pluver [possibly from “pluvial” - related to rain/rainy, or from “pleuvoir” the French verb “to rain”]; . . .

William Wood, 1634

Of their fishing, in this trade they be very expert, being experienced in the knowledge of all baietes, fitting sundry baietes for several fishes, and diverse seasons; . . . they make likewise very strong Sturgeon nets with which they catch Sturgeons of 12. 14. and 16. some 18. foote long in the day time, in the night time they betake them to their Burttchen Cannows in which they carry a forty fathome line, with a sharpe bearded dart, sharpened at the end thereof; then lightning a blazing torch made of Burethen rindes, they weave it too and againe by their Cannow side, which the Sturgeon much delighted with, comes to them tumbling and playing, turning up his white belly, into which they thrust their launce, his backe being impenetrable; which done they haile to the shor[re their strugling prize.

William Wood, 1634

William Wood and others describe Indian houses that are comfortable, dry, and warm. In addition, the architecture and building materials were well suited to their needs and the challenges of the climate. Today, we can experience these dwellings at the
Like their building technologies, the Indians had highly developed knowledge and techniques for fishing, and the Merrimack River provided more than enough fish for a robust diet. The Merrimack had anadromous fishes, which migrate from the sea into fresh water to spawn. These include salmon, sturgeon, alewifes, and shad. Also, the river had catadromous fishes, such as eels, which migrate from fresh water into the sea to spawn. The Indians knew how to preserve the fish with heat and smoke for later use. Some European writers expressed frustration that the Indians would only catch what they needed and not catch more and sell the surplus to them. This was similar to their inability to understand that the Indians did not want to domesticate animals and build fences.

According to Daniel Gookin,

Their food is generally boiled maize, or Indian corn, mixed with kidney-beans, or sometimes without. Also they frequently boil in this pottage fish and flesh of all sorts, either new taken or dried, as shads, eels, alewifes or a kind of herring, or any other sort of fish. But they dry mostly those sorts before mentioned. These they cut in pieces, bones and all, and boil them in the aforesaid pottage. I have wondered many times that they were not in danger of being choked with fish bones; but they are so dexterous to separate the bones from the fish in their eating thereof, that they are in no hazard. Also they boil in this furmenty all sorts of flesh, they take in hunting: as venison, beaver, bear's flesh, moose, otters, rackoons, or any kind that they take in hunting; cutting this flesh in small pieces, and boiling it as aforesaid. Also they mix with the said pottage several sorts of roots; as Jerusalem artichokes, and ground nuts, and other roots, and pompions [pumpkins], and squashes, and also several sorts of nuts or masts, as oak-acorns, chesnuts, walnuts: these husked and dried, and powdered, they thicken their pottage therewith. Also sometimes they beat their maize into meal, and sift it through a basket, made for that purpose. With this meal they make bread, baking it in the ashes, covering the dough with leaves. Sometimes they make of their meal a small sort of cakes, and boil them. They make also a certain sort of meal of parched maize. This meal they call nokake. It is so sweet, toothsome, and hearty, that an Indian will travel many days with no other food but this meal, which he eateth as he needs, and after it drinketh water. And for this end, when they travel a journey, or go a hunting, they carry this nokake in a basket, or bag, for their use.
There are among them certain men and women, whom they call powows. These are partly wizards and witches, holding familiarity with Satan, that evil one; and partly are physicians, and make use, at least in show, of herbs and roots, for curing the sick and diseased. These are sent for by the sick and wounded; and by their diabolical spells, mutterings, exorcisms, they seem to do wonders. They use extraordinary strange motions of their bodies, insomuch that they will sweat until they foam; and thus continue for some hours together, stroking and hovering over the sick. Sometimes broken bones have been set, wounds healed, sick recovered; but together therewith they sometimes use external applications of herbs, roots, splintering and binding up the wounds. These powows are reputed, and I conceive justly, to hold familiarity with the devil; and therefore are by the English laws, prohibited the exercise of their diabolical practices within the English jurisdiction, under the penalty of five pounds,—and the procurer, five pounds,—and every person present, twenty pence. Satan doth strongly endeavour to keep up this practice among the Indians: and these powows are factors for the devil, and great hinderers of the Indians embracing the gospel. It is no small discouragement unto the Indians in yielding obedience unto the gospel, for then, say they, if we once pray to God, we must abandon our powows; and then, when we are sick and wounded, who shall heal our maladies?

*Daniel Gookin*

Gookin’s description of the Indians’ foods and cooking practices relate a healthy and nutritious diet with plenty of variety, macronutrients, and micronutrients. The European criticism of their agricultural practices and lack of animal husbandry had to do with their own prejudices not with an understanding of the Indians’ lives or wellbeing. Their home was not a wilderness. The Indians impacted the environment; they changed it and altered it. They used controlled burning of the forests, they constructed fish weirs, and they cleared and maintained agricultural fields.

Daniel Gookin (1612 - 1687) was a complex and fascinating person. He both was embedded in and transcended his period in history. In 1656, Gookin was appointed to the position of Superintendent of the Praying Indians, which he held for the rest of his life. He was controversial and unpopular because of his support of the Indians.

Gookin wrote three books, two of which survive today. In 1674, he wrote *Historical Collections of the Indians in New England*, which was not published until 1792. *An
Historical Account of the Doings and Sufferings of the Christian Indians in New England was finished in 1677. The book was lost for many years and was found in England. The American Antiquarian Society printed it in 1836. In 1681 Gookin was made Major General of the colony. He died poor and John Eliot procured ten pounds to support his widow and is buried in the Old Cambridge Burying Ground near Harvard University.

Gookin’s descriptions of the medicines and healings give us both a fascinating view of the Indians and of the colonist mindset about them. The Indians had a variety of interventions that worked with at least some of the illnesses and injuries; broken bones were set, wounds healed, and medicines comforted and cured. Even if some of the practices described were ineffective or only had a placebo effect, the sick or injured Indian certainly felt cared for and they and others saw positive results.

It seems that Gookin had ambivalence about these practices that many of his fellow colonists who saw things in more absolute terms did not have. His references to the “devil” and “Satan” must be seen in the context of his time. Many of the Indians had not adopted Christianity at that point, and in colonial Massachusetts in those decades you were either a Christian or you were under Satan’s spell. Even those adhering to the “wrong” (i.e., non-Puritan) version of Christianity (e.g., Quakers, Jesuits, Roger Williams) were not tolerated. Gookin’s writings imply that the Indians were not inherently evil and forever condemned, they just had not converted at that point, but were certainly qualified to be.

John Smith, before the epidemics, wrote that

[and surely by reason of those sandy cliffs and clifts of rocks, both which we saw so planted with Gardens and Corne fields, and so well inhabited with a goodly, strong and well proportioned people, besides the greatnesse of the Timber growing on them, the greatnesse of the fish and moderate temper of the ayre (for of twentie five, not any was sicke, but two that were many yeares diseased before they went notwithstanding our bad lodging and accidentall diet) who can but approove this a most excellent place, both for health & fertility? And of all of the foure parts of the world that I have yet seen not inhabited, could I have but meanes to transport a Colonie, I would rather live here than anywhere: and if it did not maintaine itself, were wee but once indifferently well fitted, let us starve. John Smith, 1616]
Smith’s glowing account of the available foods, appearance of the local inhabitants, and health and pleasantness of the environment are well suited for a modern travel brochure or real estate guide. Even if there was some hyperbole involved, the Indians at this point in their history were not struggling, suffering, or constantly at war.

The Indians who lived here were healthy, well fed, well governed, and lived in harmony with the environment. Life was not perfect; there was sickness and disease, however, there were few epidemic and no pandemic diseases. Reasons for this might be that; villages were not large enough for crowd diseases, there was space or buffer zones between villages, food and fuel were plentiful, the food was healthy and well cooked, there were no domesticated animals except the dog (which is not a vector of human epidemic disease) to harbor pathogens or serve as vectors, there was plenty of fresh water, there were none of the filthy conditions of European cities, shelters were warm yet well-ventilated, they had many effective medicines and treatments for injuries and illnesses, the overall way of life was healthy, the use of land and resources was sustainable, and the use of sweat lodges might have been beneficial for both the prevention and cure of some illnesses.

Before contact, there were battles and armed conflicts between the Indians, but these were nothing like the devastating wars that would be introduced by the Europeans. Battles occurred, but they were more like “an eye for an eye” retribution than total war and destruction of the enemy. The diverse Indian communities existed in close proximity for centuries. Once the Europeans arrived hostilities escalated, unfamiliar and more damaging weapons were introduced, and the goals and results of the conflicts changed.

First Contact (circa 1604 to 1616)

The first contact between Europeans and the Indians in the Merrimack Valley will never be known with certainty. For this account, I set the first contact at around 1604, though the possibility exists that it was earlier, and even much earlier. There was a great deal of activity in surrounding areas beginning in 1602 to 1605 and continuing to the first epidemic in 1616, and the quantity and quality of the contacts were changing.

This span of years contains a series of escalating events that changed the relationships from mutually beneficial to exploitative. The goals of the Europeans were no
longer to be traders and explorers, they were starting to become settlers, here to stay, and they wanted others from the Old World to follow. A series of related and unrelated events between 1602 and 1616 triggered disruptions to the Indian way of life, their social order and belief systems, and their environment, which weakened them socially, psychologically, and physically.

There was possible contact before 1602. For example, Norse sailors or Vikings visited coastal areas of New England and Canada around 1000 A.D. Their goal was likely to get timber and they did not make any permanent settlements. Although L'Anse aux Meadows in Newfoundland could be considered a settlement, it was not permanent or a colony. Also, fishermen from Portugal, the Basque region, and the port of Bristol in southwest England most likely landed on the northeast coast throughout the fifteenth and sixteenth centuries for brief periods; however, their goal was not settlement, colonization, or exploration. With the abundant fish population in the ocean, and fresh water and wood near the shore, there was no reason for them to sail up rivers or go inland.

First contact between Europeans and Indians in this area could have been anywhere from the fifteenth century to the voyages of Bartholomew Gosnold, George Weymouth, Martin Pring, Samuel de Champlain, and Henry Hudson. Explorers of the northeast, with year of voyage and the area of the northeast explored, included:

- Giovanni da Verrazzano, 1524, coast of North America including Narragansett Bay;
- Estevão Gomes, 1525, Penobscot River, Hudson River;
- Pierre Du Gua de Monts, 1599, northeastern North American coast;
- Bartholomew Gosnold, 1602, Cape Cod with brief encampment on Cuttyhunk;
- George Weymouth, 1602, Maine; 1605, the coast of Maine, the mouth of the Kennebec River, and Monhegan Island;
- Martin Pring, 1603, Piscataqua River; 1606, the Maine coast;
- Samuel de Champlain, 1604 to 1607, northeastern North American coast;
- Henry Hudson, 1609, Hudson River, Cape Cod.

**Key/consequential encounters during First Contact**
Some early explorers were looking for the Northwest Passage, some were hoping for the gold that the Spanish Conquistadors found in Central and South America, and some were looking for other ways to make a fortune. As the dreams of finding an easy westward overseas route to the Orient or the Seven Cities of Gold dissolved, other possible routes to riches in the New World became the goal. Europeans were looking for raw materials that could be shipped to the Old World, sold at a profit, and provide income to finance the voyages and settlements.

As strange as it may seem, the first substitutes for spices and gold were beaver pelts. Cod, which is low in fat and therefore easy to preserve for up to two years by drying with salt, sassafras, thought to be a cure for syphilis and other ailments, and timber were other promising commodities. But nothing fueled the European capitalist spirit like the beaver.

Hats made from felted beaver fur were in fashion in Europe from the sixteenth to the nineteenth centuries. The demand for beaver pelts had already driven the species to extinction in England and near-extinction in most of the European continent. The pelts of these unusual and interesting animals became the major commodity for funding the European voyages to North America and paying back the investors of the voyages.

In North America, the beaver was a “keystone” species (i.e., a species on which other species and the overall balance of the ecosystem depend). The beavers’ dams transformed streams or brooks into ponds, swamps, wetlands, meadows, and riverine forests. These wet areas were beneficial to many different species including humans. The dams and the resulting changes to the land provided habitats and ecological niches, lessened the effects of drought, and filtered the water moving downstream.

The Indians understood the importance of beavers to their environment. They selectively hunted beaver for food and furs, but they would never, before European interventions, wipe out a whole colony. In addition, the act of skinning the beaver for its pelt and leaving the rest of the beaver to rot ran counter to the Indians’ worldview and way of life.

The French, English, and Dutch entrance into the fur trade disrupted trading patterns as well as other dynamics between the Indian tribes, as trading went from reciprocity to accumulation. Other problems caused by the fur trade were that it focused Indian hunting practices on beaver to the exclusion of other beneficial activities, led to
more wars and made the wars bloodier and deadlier, led to more prolonged and extensive contacts between Europeans and Indians, and altered the environment, which in turn affected agriculture, hunting, trapping, and fishing. Later on, the introduction of wampum as a currency in trade further exacerbated the problems. Overall, the fur trade caused the disruption of lifestyles for the Indians, contributing to a disequilibrium that helped pave the way for the European-introduced diseases.

The Tarrantine Wars (1607 to 1615) were started and perpetuated because of the beaver fur trade. The Tarrantines (the Basque word for trader) were an alliance of Micmacs and others against Maine tribes fighting to control the fur trade with the French. The French traded with both sides encouraging, exploiting, and joining the conflicts. The eponymous “Beaver Wars” (1640 to 1701; also called the French and Iroquois Wars) came later. The Tarrantine Wars and Beaver Wars were not about land; both were fought for European fashion and a status symbol of the period. The fur trade aggravated existing hostilities and changed the nature and goals of the war, including the introduction of gunpowder weapons (the Tarrantine Wars were the first armed conflicts where Indians used gunpowder weapons against each other), and a winner-take-all mindset, which increased the stakes for winning and losing. Indians communities, like the Pawtucket, who wanted to stay out of the conflicts, were surrounded an all sides by them.

In 1604, Samuel de Champlain’s voyage passed the mouth of the Merrimack River. Some sources state the Champlain “discovered” (definitely in quotes) the Merrimack River. His is given credit by many sources for being the first European to name the Merrimack, which he called Rivière du Gas, and putting it on a map as “R. du Gas.” My sense is that he sailed past the Merrimack, but did not enter the harbor or the river. He did land near the Penobscot River in Maine, on Cape Cod, and at other areas along the coast. Champlain also made other voyages along the coast between 1604 and 1607.

In 1609, near today’s Ticonderoga, New York, Champlain killed two Iroquois chiefs with one shot of an arquebus, while a shot by one of his men killed a third chief (some accounts say that Champlain killed all three chiefs). Chaplain’s multiple killing was possible because the arquebus was essentially a small cannon that could be packed with multiple projectiles. Champlain had allied with the Huron (Wendat) and other tribes against the Iroquois who were at war to control the fur trade with the French.
There were certainly other key encounters in this period that were not recorded for history, and various accounts and retellings of recorded encounters contain more or fewer details that sometimes agree and sometimes disagree with each other. While the exact details may never be known, most importantly, the overall effects were signs of invasion and occupation that caused disruptions and damage to the Indian communities.

This period also includes George Weymouth’s 1602 and 1605 expeditions. In 1605, Weymouth’s men captured five Indians, returned to England and presented three of the Indians to their sponsor, Ferdinando Gorges. Some modern day accounts report that Weymouth only kidnapped three Indians, and some accounts say that one of the captives was Squanto, the famous helper of the Pilgrims and kidnap victim of Thomas Hunt in 1614, discussed below.

The eyewitness and chronicler of Weymouth’s voyage, James Rosier, lists and names five Indian captives, none of whom was Squanto. Putting aside the misinformation, Weymouth’s kidnappings had a pervasive and damaging effect on Indian-European relations in general and on one potentially significant English settlement in particular.

The Popham Colony (aka Sagadahoc Colony) was a short-lived settlement founded in 1607 and located near the mouth of the Kennebec River. It was founded with the hope that building ships could be a way to fund settlements in North America. Good timber for shipbuilding was abundant in the New World and disappearing in the Old World. The colony did produce the first successful ship built in the Americas, named the *Virginia of Sagadahoc*.

One of Weymouth’s kidnapping victims named Skidwarres, a Pemaquid Abenaki, returned with the settlers of the Popham Colony who hoped that he would help with their relations with local Indians. Some current accounts blame intra-settlement squabbles for the colony’s failure; however, there can be little doubt that the distrust resulting from Weymouth’s earlier kidnappings caused friction rather than cooperation with the Indians that could have led to the success of this colony.

In 1611, Edward Harlow returned to England from North America with twenty-nine kidnapped Indians aboard his ship. Three were captured at Mohegan Island in Maine and the others were abducted from other communities including today’s Martha’s Vineyard.
One of these captives named Epenow was put on public display in London. He devised an escape plot and told his captors that there was a gold mine on Martha’s Vineyard. His captors sent him on an expedition to the island where he escaped from the ship with the help of Indians shooting arrows at the ship from canoes. There were deaths on both sides of the battle, but Epenow lived and resisted, and influenced others to resist, European settlement in New England.

In 1614, Squanto (1585 or 1592 - 1622) and as many as 23 other Indians were kidnapped by the Englishman Thomas Hunt who was one of John Smith’s lieutenants. This was done without John Smith’s knowledge. Hunt attempted to sell Squanto and the other Indians into slavery in Spain. They were freed, possibly ransomed, by friars in Spain and sent to England. There they came under the care of a merchant, John Slany. Squanto learned English and was used by Slany as an interpreter and an expert on New England. To get back to New England, Squanto tried to take part in an expedition that was not successful, and he returned to England in 1618.

In 1619, Squanto returned to his homeland to find that his community had been wiped out by epidemics. His time in Europe kept him away from his village, and kept him alive long enough to help the Pilgrims survive. Squanto must have encountered diseases in Europe, but he survived those. He died in 1622 just a few years after he returned to America of what William Bradford called “Indian fever,” mentioning his “bleeding much at the nose, which the Indians take as a symptom of death.”

There are interesting stories about a French shipwreck, which was possibly more than one shipwreck, in 1614 off the Massachusetts coast. This shipwreck is a key or consequential encounter that took place during this period; however, I will discuss this event as a speculation about the causes of the epidemics below rather than as a key encounter here.

Meanwhile to the west, the first Dutch settlement in the Americas was founded in 1615 on Castle Island in the Hudson River near today’s Albany, New York. This was a trading post for the fur trade and a “factory” where furs were packed for shipping across the ocean.
In 1616, an expedition financed by Ferdinando Gorges and led by Richard Vines established a settlement at the mouth of the Saco River in Maine where they spent the winter of 1616-1617. This was a site of the disease for the Indians and will be discussed below.

Things were changing for the Pawtucket and other Pennacook with the French here to establish New France to the north, the English here to establish New England to the south and east, and the Dutch here to establish New Netherland to the west. Their goals were not yet to get rid of the Indians. This would not have been possible at this point; the Indians’ numbers were still too great, some alliances were still strong, and their knowledge of the land, survival skills, and abilities were still too powerful. However, profound changes had taken place and it was no longer the same world that it was just a few years before.

Contact: Epidemics (1616 to 1634)

In the years 1616 to 1619 a horrible epidemic or series of epidemics killed many of the Indians along the Massachusetts coast. Inland communities were affected less or not at all. Penacook communities were on the western border of the affected area, but were likely hard hit because of movement along the Merrimack River to the coast.

The cause or causes might never be known for sure, though there have been many speculations throughout history. While identifying a microbe or microbes is instructive, it is also important to examine how the diseases they caused were interpreted at the time and later, and the effects the diseases had beyond the immediate mortality.

Distilling the information about epidemics to what is known with some confidence: They took place mostly in the winter months during the years 1616/17, 1617/18, and 1618/19; they affected Indians most significantly along the coast, and less severely or not at all toward the interior; Europeans were not affected; many Indian communities that were affected were not completely destroyed; reported signs and symptoms were fever, headache, nosebleeds, jaundice, and skin lesions; and they took place while other significant damage was being done to the Indians’ environment and way of life.
I will refer here to the diseases or disease that struck the Indians in this area in the years 1616 through 1619 as the Indian epidemics. I use the plural because it seems to me to have been a series of three epidemics.

**Historical descriptions of the disease and its effects**

John Smith saw the New England coast before and after the epidemics. His writings from an early voyage, quoted in a section above, described healthy Indians in a healthy environment. In 1631, writing about the years 1616 to 1619, Smith mentioned “three plagues in three years successively” that depopulated the land making room for his countrymen, and speculated on the potential of alleviating the burden that the poor placed on society in the Old World:

> Now when these shall have laid the foundations and provided the meanes beforehand, they may entertain all the poore artificers and laborers in England and their families which are burdensome to their Parishes and Countries where they live upon almes and benevolence for want of worke; which if they would but pay for their transportation, they would never be troubled with them more; for there is vast land enough for all the people in England, Scotland, and Ireland, and it seems God hath provided this Country for our Nation, destroying the natives by plague, it not touching one Englishmen, though many traded and were conversant amongst them; for they had three plagues in three years successively neere two hundred miles along the Sea Coast, that in some places there scarce remained five of a hundred . . . *John Smith, 1631*

According to the Jesuit missionary Biard, the epidemic infected the Indians on the Maine coast in 1616, and the Indians had not experienced an event like this before:

> They are astonished and often complain, since the French mingle with and carry on trade with them, they are dying fast, and the population is thinning out. For they assert that, before this association and intercourse, all their countries were very populous, and they tell how one by one the different coasts, according as they have begun to traffic with us, have been more reduced by disease . . . *Baird, 1616*

Nothing about the epidemics was written by a direct observer. The closest to direct observers were Richard Vines, whose observations were reported by Ferdinando Gorges (there is no direct account from Vines), and Thomas Dermer. As mentioned above,
Richard Vines and his expedition wintered on the Saco River in the winter of 1616-1617 during the epidemic. Even though they lived with the infected and suffering Indians, Vines and his crew never caught the disease. Gorges refers to the epidemic as “the Plague.” Other early and primary sources use "plague," "the plague," and "the Plague;" however, as I will discuss in more detail below, I do not believe it was the bubonic or pneumonic plague, but these writers were using the term as a synonym for epidemic.

Discussing the winter of 1616-1617, and writing later in a book published in 1658, Gorges wrote

. . . I was forced to hire Men to stay there the Winter Quarter at extream rates, and not without danger, for that the War had consumed the Bashaba, and the most of the great Sagamores, with such Men of action as followed them, and those that remained were sore afflicted with the Plague, for that the Country was in a manner left void of Inhabitants; Notwithstanding, Vines and the rest with him that lay in the Cabbins with those People that dyed some more, some lesse, mightily, (blessed be GOD for it) not one of them ever felt their heads to ake while they stayed there . . . Ferdinando Gorges, 1658

In 1619, Squanto returned to New England by joining an expedition led by Captain Thomas Dermer. Captain Dermer's fleet arrived at Monhegan Island (Maine) in May 1619. Dermer, some of the crew, and Squanto sailed out to locate Squanto’s home village of Patuxet. They arrived at Patuxet in June of 1619 where they found that there had been terrible epidemics in the past three years, and the residents of Patuxet, as well as other people in communities along the coast, had died as a result. Dermer wrote:

To his Worshipful Friend M. Samuel Purchas, Preacher of the Word, at the Church a little within Ludgate, London. Sir, IT was the nineteenth of May, be before I was fitted for my discovery, when from Monahiggan I set sayle in an open Pinnace of five tun, for the Hand I told you of. I passed along the coast where I found some ancient plantations [Indian villages], not long since populous now utterly void; in other places a remnant remains, but not free of sickness. Their disease the plague, for we might perceive the sores of some that escaped, who descried the spots of such as usually die. When [we] arrived at my savage’s [Squanto’s] native country [we found] all dead. Thomas Dermer, 1620
As mentioned above, Daniel Gookin wrote that “The principal nations of the
Indians, that did, or do, inhabit within the confines of New England, are five: 1. Pequots; 2.
Narragansitts; 3. Pawkunnawkutts; 4. Massachusetts; and, 5. Pawtucketts.” In his writings,
Gookin misplaces the 1616 - 1619 epidemics in the years 1612 and 1613. He mentions
severe population declines in all five principal nations; however, he only mentions the
epidemic for three of them: The Pawkunnawkutts, the Massachusetts, and the Pawtucketts.

According to Gookin, the Pawkunnawkutts (Wampanoags),
were a potent nation in former times; and could raise, as the most credible
and ancient Indians affirm, about three thousand men. They held war with
the Narragansitts; and often joined with the Massachusetts, as friends and
confederates against the Narragansitts. This nation, a very great number of
them, were swept away by an epidemical and unwonted sickness, An. 1612
and 1613, about seven or eight years before the English first arrived in those
parts, to settle the colony of New Plymouth. Thereby divine providence
made way for the quiet and peaceable settlement of the English in those
nations. What this disease was, that so generally and mortally swept away,
not only these, but other Indians, their neighbors, I cannot well learn.
Doubtless it was some pestilential disease. I have discoursed with some old
Indians, that were then youths; who say, that the bodies all over were
exceeding yellow, describing it by a yellow garment they showed me, both
before they die, and afterward. Daniel Gookin

The Massachusetts “nation” of Indians “could, in former times, on full war,
about three thousand men, as the old Indians declare.”

In An. 1612 and 1613 [now known to be 1616 to 1619], these people were
also sorely smitten by the hand of God with the same disease, before
mentioned in the last section; which destroyed most of them, and made
room for the English people of Massachusetts colony, which people this
country, and the next called Pawtucket. There are not of this people left at
this day above three hundred men, besides women and children. Daniel
Gookin

The Pawtucketts [most likely the Pennacook including the Pawtucket] had
under them several other smaller sagamores; as the Pennakooks, Agawomes, Naamkeeks, Pascataways, Accomintas, and others. They were
also a considerable people heretofore, about three thousand men; and held
amity with the people of Massachusetts. But these also or almost totally
destroyed by the great sickness before mentioned; so to this day, there are
not above two hundred and fifty men, besides women and children. This
country is now inhabited by the English under the government of
Massachusetts. Daniel Gookin

Thomas Morton in 1637 wrote:
The hand of God fell heavily upon them, with such a mortall stroake
that they died on heapes as they lay in their houses. And the living, that were
able to shift for themselves, would runne away and let them dy, and let there
Carkeses ly above the ground without buriall. For in a place where many
inhabited, there hath been but one left alive, to tell what became of the rest,
the livinge being (as it seems) not able to bury the dead, they were left for
Crowes, Kites and vermin to pray upon. And the bones and skulls upon the
several places of their habitations, made such a spectacle after my comming
into those partes, that as I travailed in that Forest, nere the Massachussets, it
seemed to mee a new found Golgotha. Thomas Morton, 1637

According to Edward Winslow and William Bradford, writing in and about
the years 1620 and 1621,
[Samoset] was a tall straight man, the haire of his head blacke, long behind,
onely short before, none on his face at all; he asked some beere, but we
gave him strong water, and bisket, and butter, and cheese, & pudding, and a
peece of a mallerd, all which he liked well, and had bin acquainted with
such amongst the English; he told us the place where we now line, is called,
Patuxet, and that about foure yeares agoe, all the Inhabitants dyed of an
extraordinary plague, and there is neither man, woman, nor childe
remaining, as indeed we haue found none, so as there is none to hinder our
possession, or to lay claime vnto it. Mourt’s Relation, 1622

Speculations about causation

Stories about a French shipwreck around 1614 off the Massachusetts coast,
mentioned above, appeared and have been retold and changed over the course of history.
The ship was a fishing vessel and the story of the wreck itself is likely true. There also might
have been one or more additional shipwrecks around this time and area and stories have
been combined. Somehow, this wreck led first to a prophecy, then to the identified cause
of the great dying in the eyes of some Europeans in the years and decades after the
epidemics. It seems to be a case study of the creation of a myth; a narrative explaining man
and natural events, why things are as they are, according to the believers’ worldviews. In this case, it began as what might have been a true story, then, it was embellished and became an explanation, reason, and rationalization for the devastation.

Some of the European accounts below begin with the capture of the wreck’s survivors by Indians and their mistreatment and use as slaves by the Indian captors. As this wreck and capture took place shortly after Thomas Hunt’s kidnapping and enslaving of 24 or more Indians including Squanto from these Indian communities, some writings suggest that the Indians believed that the ship’s crew had come to capture more Indians and that the survivors of the shipwreck were seen as prisoners of war. This is an example of how the key first contacts mentioned above affected later encounters and created a cycle of mistrust and retribution between the inhabitants and the newcomers.

In Of Plimouth Plantation, William Bradford, discussed this encounter between Europeans and Indians before the arrival of the Pilgrims:

These thing were partly the reason why they [the Indians] kept aloofe and were so long before they came to the English. An other reason (as after them selvs made known) was how aboute 3. years before, a French-ship was cast away at Cap-Codd, but the men gott ashore, and saved their lives, and much of their victails, and other goods; but after the Indeans heard of it, they geathered togeather from these parts, and never left watching and dogging them till they got advantage, and kild them all but 3. or 4. which they kept, and sent from one Sachem to another, to make sporte with, and used them worse then slaves; (of which the foresaid Mr. Dermer redeemed 2. of them;) and they conceived this ship was now come to revenge it.

Phinehas Pratt came to New England in 1622 as a member of the unsuccessful Wessagusset colony. In 1662, he wrote “A declaration of the affairs of the English people that first inhabited New England,” which is also known as The Narrative of Phineas Pratt (I have modernized the spelling and grammar in the quote below). Pratt presented his “declaration” to the General Court of Massachusetts as part of his request for financial help. Pratt recounted his version of the shipwreck and its aftermath:

The savages seemed to be good friends with us while they feared us, but when they saw famine prevail, they began to insult, as appears by the sequel; for one of their Penesses, [Pnieses; elite warriors and advisors to the
sachem], or chief men called Pexsouth [Pecksuot], employed himself to learn to speak English, observing all things for his bloody ends. He told me he loved English men very well, but he loved me best of all. Then he said, “you say French men do not love you, but I will tell you what we have done to them. There was a ship broken by a storm. They saved most of their goods and hid it in the ground. We made them tell us where it was. Then we made them our servants. They wept much. When we parted them, we gave them such meat as our dogs eat. One of them had a book he would often read in. We asked him “what his book said.” He answered, “it says, there will a people, like Frenchmen, come into this country and drive you all away,” and now we think you are they.

According to John Smith writing in 1631,

and as they report thus it began: A fishing ship being castaway upon the coast, two of the men escaped on shore; one of them died, the other lived among the natives till he had learned their language; then he persuaded them to become Christians, shewing them a Testament, some parts thereof expounding as well as he could, but they so much derided him, that he told them hee feared his God would destroy them: whereat the King assembled all his people about a hill, himself with the Christian standing on the top, and demanded if his God had so many people and able to kill all those?

He answered yes, and surely would, and bring in strangers to possess their land; but so long they mocked him and God, that not long after such a sickness came, that of five or six hundred about the Massachusetts there remained but thirty, on whom their neighbors fell and slew twenty eight: the two remaining fled the Country till the English came, then they returned and surrendered their country and title to the English: if this be not true in every particular, excuse me, I pray you, for I am not the Author: but it is most certain there was an exceeding great plague amongst them; for where I have seen two or three hundred, within three yeares there remained scarce thirty, but what disease it was the Salvages knew not till the English told them, never having seen nor heard of the like before. John Smith, 1631

John Smith might have been referring to this 1630 narrative with no recorded author:

About 16 yeares past [1614?] an other french man being nere the Massachusetts upon a Fishing voyadge & to discover the Bay was
castaway, one old man escaped to shoare whom the Indians preserved alive, & after a yeare or two he having obtained some knowledge in their language, perceiving how they worshipped the Devill, he used all the meanes he could to perswade them from this Horrible Idolatrye to the worship of the Trew God, wherupon the Sagamore called all his people to him to know if they would follow the advise of this good old man, but all answered with one consent that they would not change therie God & mocked & laughed at the French man & his God. Then said he, I feare that God in his anger will destroy you. Then said the Sagamore, Your God hath not thus manie people, neither is he able to destroy us. Whereupon the French man said, that he did verily feare his God would destroy them & plant a better people in the land; but they continued still mocking him & his God untill the plague came which was the yeare following &continued for 3 yeares until it had swept almost all the people out of that country for about 60 miles together upon the Sea Coast. Narrative [addressed to Secretary Coke?] concerning the settlement of New England. - 1630.

In 1677, Increase Mather wrote “Phinehas Pratt's Relation,” which was part of his "A Relation of the Troubles which have happened in New-England, by reason of the Indians there. From the year 1614 to the year 1675.” One can tell by the title that sentiments were moving even further away from the Indians.

There is an old Planter yet living in this country, being one of those that were employed by Mr. Weston, who also hath given some account of these matters.

He doth relate, and affirm, that at his first coming into this country, the English were in a very distressed condition, by reason of famine, and sickness which was amongst them, whereof many were already dead; and that they buried them in the night, that the Indians might not perceive how low they were brought.

This Relator doth moreover declare, that an Indian Panies [Pniese], who secretly purposed bloody destruction against the English, and made it his design to learn the English tongue, to the end he might more readily accomplish his hellish devices, told him, that there had been a French vessel cast away upon these coasts, only they saved their lives and their goods, and that the Indians took their goods from them, and made the Frenchmen their servants, and that they wept very much, when the Indians parted them from one another, that they made them eat such meat as they gave their dogs. Only one of them having a good Master, he provided a Wife for him, by whom he had a Son, and lived longer than the rest of the French men did; and that one of them was wont to read much in a Book
(some say it was the New-Testament) and that the Indians enquiring of him what his Book said, he told them it did intimate, that there was a people like French men that would come into the Country, and drive out the Indians, and that they were now afraid that the English were the people of whose coming the French man had foretold them.

A few decades later in 1702, within the context of the Pilgrim story, Increase Mather’s son, Cotton Mather, told his version of the story of the shipwrecked Frenchman’s prophecy, the Indians’ alleged response, and the prescribed consequences:

Their [the Pilgrims’] design was to have sat down some where about Hudson's River; but some of their neighbours in Holland having a mind themselves to settle a plantation there, secretly and sinfully contracted with the master of the ship, employed for the transportation of these our English exiles, by a more northerly course, to put a trick upon them. 'Twas in the pursuance of this plot that not only the goods, but also the lives of all on board were now hazarded, by the ships falling among the shoals of Cape-Cod; where they were so entangled among dangerous breakers, thus late in the year, that the company, got at last into the Cape-Harbour, broke off their intentions of going any further. And yet, behold the watchful providence of God over them that seek him! this false-dealing proved a safe-dealing for the good people against whom it was used. Had they been carried according to their desire unto Hudson's River, the Indians in those parts were at this time so many, and so mighty, and so sturdy, that in probability all this little feeble number of Christians had been massacred by these bloody salvages, as not long after some others were: whereas the good hand of God now brought them to a country wonderfully prepared for their entertainment, by a sweeping mortality that had lately been among the natives. "We have heard with our ears, O God, our fathers have told us, what work thou didst in their days, in the times of old; how thou dravest out the heathen with thy hand, and plantedst them; how thou did'st afflict the people, and cast them out!" The Indians in these parts had newly, even about a year or two before, been visited with such a prodigious pestilence, as carried away not a tenth, but nine parts of ten, (yea, 'tis said, nineteen of twenty) among them: so that the woods were almost cleared of those pernicious creatures, to make room for a better growth. It is remarkable, that a Frenchman who, not long before these transactions, had by a shipwreck been made a captive amongst the Indians of this country, did, as the survivors reported, just before he dyed in their hands, tell those tawny pagans, "that God being angry with them for their wickedness, would not
only destroy them all, but also people the place with another nation, which would not live after their brutish manners." Those infidels then blasphemously replied, "God could not kill them;" which blasphemous mistake was confuted by an horrible and unusual plague, whereby they were consumed in such vast multitudes, that our first planters found the land almost covered with their unburied carcases; and they that were left alive, were smitten into awful and humble regards of the English, by the terrors which the remembrance of the Frenchman's prophesie had imprinted on them. [all italics in original] *Cotton Mather, 1702*

Ironically, Cotton Mather is often credited with advanced understandings of germ theory and disease that were far ahead of his time, though he was not willing to attribute the Indians’ affliction to “animalcules.” While he attributed the Indians’ disease to an Act of God, he explained smallpox among the colonists using an early version of germ theory and advocated for widespread variolation against smallpox. He was also a leading proponent of the belief that some of his fellow colonists were witches who were actively doing the work of Satan and his spirit henchmen and should be tried and hanged if “guilty.”

Two key concepts for this book are from Oliver Wendell Holmes, Sr. (1866); 1.) “[n]othing sheds such light on the superstitions of an age as the prevailing interpretation and treatment of disease,” and 2.) “[t]he state of medicine is an index of the civilization of an age and country, — one of the best, perhaps, by which it can be judged.” In the Introduction to this book, I presented my own brief formulation of mankind’s understandings and explanations of disease as twelve different, but sometimes overlapping and combined, theories. The Europeans here in the 17th and 18th centuries saw the Indian epidemic as an “Act of God,” although “spirits,” “humor,” “miasma,” “planets,” “contagion,” “scapegoat,” and “lifestyle” theories were also used at the time to explain disease. They could pick and choose the explanation they wanted depending on the feelings about the victims.

As I will describe in later chapters, these pre-scientific theories continued to exist for decades affecting how illness was understood and how the sick were treated. Though they did not receive too much attention, it is interesting to look at how the 1616-1619 Indian epidemics were explained changed over time.
Two writers who discussed the epidemics in the years between the Colonial period when the “Act of God” theory dominated and the 1880’s when germ theory took over were Noah Webster and Oliver Wendell Holmes, Sr. Their theorizing is used here as examples of attempts to understand epidemics during this period of history.

Noah Webster, the “father of the American dictionary,” had no medical training, but pored over and brought together a vast amount of medical and historical material for a book titled “A Brief History of Epidemic and Pestilential Diseases: With the Principal Phenomena of the Physical World, which Precede and Accompany Them, and Observations Deduced from the Facts Stated: In Two Volumes.” (1799). Despite the word “brief” in the title, neither the title nor the book is brief. While Webster’s theorizing is complex and dated, his careful use and analysis of language and terminology are fascinating. The long title is actually a concise description of the ideas Webster discusses in the two volumes.

For Webster, in epidemic and pestilential diseases there can be a “specific contagion,” which is “[t]hat quality of a disease which communicates it from a sick to a well person, on simply inhaling the breath or effluvia from the person of the diseased, at any time and in any place.” Smallpox and measles are in this category. Then there is “infection,” which is “[t]hat quality of a disease which, tho’ insalutary, will not communicate it, without the aid of other causes, as warm weather, or peculiar situation and habit of body, and which requires the healthful person to be a considerable time, under its influence, to give it effect.” Plague “in all its forms,” dysentery, and “all typhus fevers” are examples of these diseases. Also, there is “general or primary contagion,” which is “[t]hat state of our atmosphere which produces disease, or disposes the body to disease, independent of other causes . . .”

So, here is my synopsis of a synopsis. There are specific contagions are so strong that they are passed person-to-person regardless of atmospheric conditions, there are infections that need other factors in order to spread, and there are atmospheric conditions that are so pestilential that they can produce disease on their own.
It seems that Webster would consider the Indian epidemics to be a case of an infection which, due to certain factors, some but not others were vulnerable. Referring to the selective nature of some epidemics, Webster wrote:

We have in America most illustrious examples of the distinction above mentioned. In the sweeping pestilence of 1618; when almost all the Indians perished, on a tract of three hundred miles in extent, some white men wintered in the country and associated freely with the sick, without injury. In a similar pestilence among the Indians on Nantucket, in 1763, not a white man was affected, tho never so much exposed to infection. Two or three other instances have come to my knowledge. A like discrimination took place in Egypt in the time of Moses. *Noah Webster, 1799*

Decades later, but still before germ theory, Oliver Wendell Holmes, Sr. wrote that

[w]hat this pestilence was has been much discussed. It is variously mentioned by different early writers as "the plague," "a great and grievous plague," "a sore consumption," as attended with spots which left unhealed places on those who recovered, as making the "whole surface yellow as with a garment." Perhaps no disease answers all these conditions so well as smallpox. We know from different sources what frightful havoc it made among the Indians in after years,—in 1631, for instance, when it swept away the aboriginal inhabitants of "whole towns," and in 1633. We have seen a whole tribe, the Mandans, extirpated by it in our own day. The word "plague" was used very vaguely, as in the description of the "great sickness" found among the Indians by the expedition of 1622. This same great sickness could hardly have been yellow fever, as it occurred in the month of November. I cannot think, therefore, that either the scourge of the East or our Southern malarial pestilence was the disease that wasted the Indians. As for the yellowness like a garment, that is too familiar to the eyes of all who have ever looked on the hideous mask of confluent variola [smallpox]. *Oliver Wendell Holmes, Sr., 1869*

Oliver Wendell Holmes, Sr. was ahead of his time in attributing disease to person-to-person contagion. In 1843, he wrote “The Contagiousness of Puerperal Fever” and stated that “[t]he disease known as Puerperal Fever is so far contagious as to be frequently carried from patient to patient by physicians and nurses.” Holmes the word uses “virus” in his treatise; however, he is not using it in the modern sense. He is using it as the Latin word for slime or poison. While the pathogen turned out to be bacteria, he was right about the
human vector. As will be discussed in a later chapter, his medical colleagues, especially in America, fought vehemently against this idea.

**Germ theory**

Germ theory took a long time to develop, a long time to be accepted, and even longer until it could be applied to the prevention and treatment of diseases. The basis of germ theory, that specific microbes cause specific diseases, did not become established until the 1880’s with the work of Louis Pasteur (1822 - 1895), Robert Koch (1843 - 1910), and Joseph Lister (1827 - 1912). Bacteria were identified first and the much smaller viruses were identified in the 1890’s thanks to the work of Dmitri Ivanovsky (1864 - 1920) and Martinus Beijerinck (1851 -1931).

In modern times, the speculation has been about which germ caused the Indian epidemics. An early, ambitious, and interesting article titled “The Epidemic of the Indians of New England, 1616-1620, with Remarks on Native American Infections” by Herbert U. Williams, M. D. was published in The Johns Hopkins Hospital Bulletin in 1909. Williams reviewed 23 documents that referenced the epidemic. Based on his early version of a systematic review, he seems to lean toward bubonic plague as the cause though he is less than committal to this.

Modern speculations as to the pathogen involved have included:

- The smallpox virus;
- the bubonic or pneumonic plague bacterium;
- the yellow fever virus;
- the chickenpox virus;
- the typhus bacteria;
- an influenza virus;
- a hepatitis virus or viruses;
- one of the leptospirosis bacteria that led to Weil syndrome.

Arguments can be made for and against any of these pathogens. I will present a brief discussion of each of these with my own nonprofessional speculations.

*The smallpox virus*
Smallpox is caused by one of two viruses: *Variola major* and *Variola minor*. As the names imply, *Variola major* causes more serious and lethal forms of the disease than *Variola minor*. The last case of smallpox in the world was in the 1970’s and the virus only exists today in laboratories. There are ongoing controversies about whether these last vestiges should be destroyed.

Four types of the smallpox disease have been categorized: Ordinary, modified, flat, and hemorrhagic. These were further divided into 12 subtypes with a wide range of symptoms. The World Health Organization’s classification system identifies five varieties: Ordinary, modified, *variola sine eruptione* (smallpox without rash), flat, and hemorrhagic. The Ordinary type of the disease comprised 88% of the cases, and there were three subtypes: Discrete, Semiconfluent, and Confluent.

As we saw in the quote above, Oliver Wendell Holmes, Sr. seemed to be very confident that the Indian epidemics were the Confluent subtype of smallpox. I suggest that smallpox is a suspect, but there are reasons why I do not think it was the only pathogen involved. It seems like with smallpox at least a few Europeans would have been affected. It was not an exclusively childhood disease; not all Europeans would have been exposed as children, and adults were affected in Europe and later on in colonial America. It would also seem that some Europeans would have called it smallpox, as they would have been familiar with its symptoms. Also, others who have speculated after Holmes with more modern knowledge of the disease and its symptoms have dismissed it outright. These factors leave some doubt about the smallpox virus as the only pathogen. As stated, I think that smallpox remains suspect and might be a cofactor in the overall impact of the epidemics. This idea will be discussed in more detail below.

*The bubonic or pneumonic plague bacterium*

The bacterium the causes the bubonic and pneumonic plagues is called *Yersinia pestis*. Some of the early writers referred to the epidemics as both “the Plague” and “a plague,” there is a good chance that they were using the word in the more general way and were not referring to the disease referred to over history as the Plague of Justinian, the Black Death, the Great Plague of London, and others. There are reasons why I would rule out the Plague. If it were the Plague at least some Europeans would have been affected,
and the characteristic signs and symptoms would have been noted by observers. In addition, there were not the required environmental factors for the Plague to spread. There was not the population density needed for a “crowd” disease like the Plague. Both rats and a specific species of flea (Oriental rat flea or Xenopsylla cheopis) are needed as vectors. In 1616 to 1619 New England, there were no large warehouses of stored food where significant populations of rats could live, and the Indian communities were relatively small and spaced apart compared to European cities, so rats and their fleas could not move easily from community to community. I also want to mention that the epidemics seemed to have been in the primarily in the winter months when fleas do not thrive in New England. I also contend that the smokiness of the Indians’ dwellings would be inhospitable to fleas as well as other insect disease vectors. The Indians also used plant-based insect repellants.

The yellow fever virus

The yellow fever virus (YFV) is spread by the bite of the female mosquito, so this disease could not take hold or remain in New England during the winter months. Also, it has been noted that no ships from areas of the world with the disease were sailing to New England during this period.

The chickenpox virus

Chickenpox is caused by the varicella zoster virus (VZV). It was a childhood disease in Europe and at this point in history no children were crossing the Atlantic potentially spreading the disease. There is, however, the possibility that an adult European with an outbreak of shingles caused by the VZV infected one or more Indians, so the chickenpox virus is a suspect. It is not lethal enough by itself to be the sole pathogen causing the epidemics, but could have been a cofactor. The chickenpox virus can also cause hepatitis, which is discussed below.

The typhus bacteria

Typhus fevers are caused by the rickettsiae bacteria and transmitted by arthropod (e.g. flea, mite, tick) bites. For this to affect humans on a large scale, crowding and unhygienic conditions are needed. The lack of arthropod vectors in the winter, the
uncrowded and healthy conditions, and the lack of Europeans becoming infected rule out typhus fevers.

_An influenza virus_

There are two main types of influenza virus: Type A and Type B. Type A viruses are broken down into subtypes based on the proteins and enzymes on the surface of the virus. It is these proteins that are given the H number (H for hemagglutinin, a protein) and enzymes that are given the N number (N for neuraminidase, an enzyme) resulting in H1N1, H2N2, H5N1, etc. Over the course of a flu outbreak, and from outbreak to outbreak, different types and subtypes of influenza cause the flu. Because of the changing nature of the flu virus Europeans would not have been immune and some would have been affected during one or more of the outbreaks.

_A hepatitis virus or viruses_

In a 1987 article, Arthur Spiess and Bruce Spiess suggested that the epidemics were the result of hepatic failure caused by one or more of the hepatitis viruses. There are five hepatitis viruses: Hepatitis A (HAV), Hepatitis B (HBV), Hepatitis C (HCV), Hepatitis D (HDV), and Hepatitis E (HEV). These viruses can infect by themselves (except HDV needs HBV to exist and spread; only people who are already infected with HBV can be infected with HDV) and co-infections can and do happen. As mentioned above, the chickenpox virus can also cause hepatitis. While a hepatitis virus or viruses are a suspect or suspects in the Indian epidemics, I do not think there is a strong case for these causes by themselves without other factors including other pathogens. While human contact is the vector for the diseases, the modes of transmission are different for each virus and they do not seem likely possibilities for spread between large numbers of Indians and Indian communities. These modes include contaminated food, water, and bodily fluids. Another factor that argues against hepatitis viruses without other pathogens is that hepatic failure is more chronic and less acute that the Indian epidemics seemed to be.

_One of the leptospirosis bacteria that leads to Weil syndrome_
In a 2010 article, John S. Marr and John T. Cathay suggested leptospirosis with Weil syndrome as the cause of the epidemics. They stated that this is not put forward as a definitive answer, but as “a heuristic for others to criticize and explore.” This is a great attitude in my opinion (maybe because my goal is to do the same thing), and this is all we can do without new discoveries of the remains of victims and new techniques to identify diseases in centuries-old skeletal remains. The field of science mentioned in their article, “paleomicrobiology,” may hold promise, but time, the New England climate, and the rapid European colonial and early United States development have worked against this.

There are many different types of *Leptospira* bacteria and related bacteria. If the infection causes the person to turn yellow, have kidney failure and bleeding it is then known as Weil's disease. The yellowing or jaundice is caused by hyperbilirubinemia (*hyper* = increased levels of, *bilirubin*, *emia* = in the blood), which then causes increased levels of bilirubin in the extracellular fluid. Bilirubin is the breakdown product or metabolite of *heme*, which is a component of hemoglobin, the iron-containing protein in the blood that transports oxygen.

There are a few reasons why I do not think that the epidemics were caused by *Leptospira*. First of all, I believe that Europeans would have been affected. I disagree with the articles authors that the Indians’ way of life put them a higher risk to come in contact with *Leptospira*, which live in contaminated, usually stagnant, water, mud, and soil. The Indians had adequate supplies of fresh water and had no reason to be exposed to stagnant water. In addition, the likely time of year of the epidemics was not the optimal time for *Leptospira* or for situations leading to exposure. These bacteria like wet and warm conditions, not the New England winter. Also, Indian communities were separated from each other and used many different sources of water and different and separate agricultural fields.

I concluded that only microbes with the certain characteristics could have been involved in the Indian epidemics. I ruled out the following: Diseases with a non-human vector; diseases that are carried by food, water, or filth; diseases caused by viruses that continually change and mutate; and diseases caused by bacteria.
<table>
<thead>
<tr>
<th>Disease</th>
<th>Virus or bacteria</th>
<th>Vector (Human or non-human)</th>
<th>Contaminated food or water needed for infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smallpox*</td>
<td>Virus</td>
<td>Human</td>
<td>No</td>
</tr>
<tr>
<td>Bubonic or pneumonic plague</td>
<td>Bacteria</td>
<td>Rats and Oriental rat fleas</td>
<td>No</td>
</tr>
<tr>
<td>Yellow fever</td>
<td>Virus</td>
<td>Mosquitoes</td>
<td>No</td>
</tr>
<tr>
<td>Chickenpox*</td>
<td>Virus</td>
<td>Human</td>
<td>No</td>
</tr>
<tr>
<td>Typhus</td>
<td>Bacteria</td>
<td>Arthropods (fleas, tics, mites)</td>
<td>Yes</td>
</tr>
<tr>
<td>Influenza**</td>
<td>Virus</td>
<td>Human</td>
<td>No</td>
</tr>
<tr>
<td>Hepatitis virus or viruses*</td>
<td>Virus</td>
<td>Human</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Not needed, can be a factor)</td>
</tr>
<tr>
<td>Leptospirosis</td>
<td>Bacteria</td>
<td>Mammalian reservoirs</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* Suspect

** Ruled out because of continual changes and mutations

My contention is that the Indian epidemics could only have been diseases with a human vector, as each of the non-human vector diseases as well as food and water-borne diseases can be ruled out. The reasons are that winter weather would kill insect vectors, the villages were not crowded and were separated from each other by buffer zones, and the
separation between communities including separate sources of water and food. I would add to this that the Indians were by all reports healthy before the epidemics and for thousands of years engaged in daily activities and practices that kept them healthy.

I ruled out influenza because the viruses that cause the flu continually change and mutate, therefore the Europeans would not have immunity and would have been susceptible. Also, previous exposure to a strain of the influenza virus does not provide lifelong immunity.

This is similar to the reasons why I ruled out all bacteria. While some of the Europeans might have had previous exposure to the strains of bacteria and developed some immunity, because of the nature of bacterial infections and the body’s response, they would not all have had total immunity to the bacteria and some would have been affected. Some types of bacteria were ruled out for the additional reasons stated above.

This leaves three suspects; smallpox, chickenpox, and one or more hepatitis viruses, which I contend caused the epidemics in some combination of the two or three. Two other writers have suggested these three same diseases, although I do not know if it was a result of reasoning similar to mine. Thaddeus Piotrowski wrote in the 2002 book, *The Indian Heritage of New Hampshire and Northern New England*, that

> [t]he nature of this epidemic as well as its origin remain a mystery. In all probability this “pestilential putrid fever” was either chicken pox, hepatic fever, or smallpox, or some combination of two of these or all three - all white man’s diseases. *Piotrowski (2002)*

David S. Jones, in *Rationalizing Epidemics; Meanings and Uses of American Indian Mortality since 1600* (2004), wrote that

> [i]n 1616 disease broke out in New England and raged until 1619. Although the nature of the “plague” remains unclear (smallpox? chicken pox? hepatitis?) it extended from the Penobscot River, south along the coast of Maine and Massachusetts Bay, to the eastern shore of Narragansett Bay. *Jones (2004)*

Two or more contagious diseases can occur together in a population (coinfection or comorbidity) and not interact with one another, or they can interact exacerbating the negative health effects of each disease alone. This second type of coinfection is called a
syndemic. I believe at this point that the suspected diseases occurred together in the affected Indian populations, interacted with one another and caused a syndemic. The interactions of the two of three diseases in the population are a possible reason why the cause of the epidemics has been so difficult to identify. This is also part of the reason why the epidemics were so lethal, but it is not the full reason. There were two other huge factors in the matrix or dynamic that led to the devastation; the social and environmental stressors caused by European contact and the lack of previous exposure of the Indians to these European diseases.

*Germs in contexts*

The interactions of the pathogens in the Indians’ bodies was part of the devastation; however, the social, economic, political, psychological, and biological contexts have to be considered for a fuller explanation of the suffering. I call the consideration of these other circumstances, conditions, and factors, the “germs in contexts” theory; the same germ or germs will affect a population in different ways depending on situations and backgrounds.

I will address first the biological context first. The term biological here means the whole science of living organisms and not just the pathogens involved. This includes immunology, nutrition, agriculture, and ecology.

When identifying a pathogen as the cause of the epidemics, one has to account for the lack of infection of Europeans. The way that some have explained this is to use the concept of “virgin soil epidemics.” This concept was first presented by Alfred Crosby in 1976. According to this idea, the Indians had no immunity to the pathogen while the Europeans had developed total immunity. There are two basic types of immunity; innate immunity and adaptive immunity. Innate immunity is natural resistance that the individual is born with and it is not specific to any particular disease. This is evolutionary and genetic developing from contact with diseases over centuries and millennia. Adaptive immunity results from exposure to the pathogen in childhood. If the victim survives, they are usually immune for life.

Some things did not make sense to me when applying the concept of virgin soil epidemics as the sole cause of the 1616 to 1619 Indian epidemics. If the Indians lacked innate immunity,
• why wasn’t the mortality 100%?
• why were there specific geographic boundaries for the epidemics?
• why weren’t Indian communities unaffected in 1616 to 1619 affected with the same symptoms and intensity later?
• why didn’t earlier contacts cause epidemics of a similar magnitude?

Based on these questions, my conjecture is that the Indians did not completely lack innate immunity. Even Squanto’s village of Patuxet, which was empty when the Pilgrims landed, had survivors who joined neighboring communities. Although the Indians did lack adaptive immunity to the diseases introduced by Europeans, this alone would not cause the widespread effects that took place. If the lack of adaptive immunity were a major factor, more individuals would have survived initial exposure to these diseases and developed adaptive immunity to later exposures.

There were already enough stressors on the Indians before the winter of 1616/1617 to increase vulnerability to a disease, and many survived and were trying to recover when disease hit the next winter (1617/1618), and again in 1618/1619. The three epidemics in three winters had a cumulative effect while opportunistic infections took advantage of weakened immune systems compromised by malnutrition, fatigue, the presence of other infections and diseases, and the disruptions of every aspect of the Indians’ lives. Affected were births, agriculture, hunting, fishing, spiritual practices, burial practices, political alliances, trade networks, and social networks. The Indians were not a totally vulnerable population; they were a population made increasingly vulnerable by an onslaught of overwhelming stressors and disruptions. The threats, attacks, kidnappings, and trade wars wore down bodies and souls.

The cumulative effect of multiple negative life experiences compressed into a short amount of time amplifies their effects. For example, the elderly in modern society are at a higher risk for depression because they have experienced more illnesses of themselves and family and friends, deaths of family and friends, and decreased abilities and independence in a short span of time. It is also relevant that until the invention of antibiotics, more people died of diseases during wars than from combat. Populations under stress cannot be as resilient as they would be under normal conditions.
Another key concept for this book is that “disease is framed as a multidimensional construct, rooted in mentalities and social relations as much as in biological conditions of pathology” (J. N. Hays, 2010). A related key concept that pertains specifically to this chapter is that “as recognized by both Indians and colonists since the sixteenth century, disease was socially produced: Europeans brought new pathogens to the Americas and triggered the conditions that made them so destructive” (David S. Jones, 2004).

I would like to emphasize certain phrases form the above quotes. First of all, it seems that the Indian epidemics were “rooted in mentalities and social relations as much as in biological conditions of pathology.” Blaming pathogens alone discounts the treatment of the Indians by some of the Europeans. And it was not just the treatment of the Indians themselves; it was the treatment of their environment and their entire way of life. Europeans did not just bring the germs; they “triggered the conditions that made them so destructive.”

Later epidemics

Epidemics in 1633 and 1634 were certainly smallpox, and these had even further devastating impacts on the Indians in New England, killing as many as half of the Indians in the area at that time. If the 1616/1619 epidemics were only smallpox, in more of the survivors of previous epidemics might have been immune to these later ones.

John Josselyn, referring to the 1630s, wrote

[not long before the English came to this Countrey, happened a great mortality amongst them, especially where the English afterwards planted, the East and Northern parts were sore smitten with the Contagion; first the plague, afterwards when the English came by the small pox, the three Kingdoms or Sagamoreships of the Massachusets were very populous, ... but by the plague were brought from 30000 to 300. There are not many now to the Eastward, the Pequots were destroyed by the English: the Mohacks are about five hundred. John Josselyn, 1638]

According to William Bradford,

... for it pleased God to visite these Indeans with a great sike, and such a mortalitie that of a 1000. above 900. and a halfe of them dyed, and many of them did rott above ground for want of burial ...
This spring, also, those Indeans that lived aboute their [the Dutch] trading house there fell sick of the small poxe, and dyed most miserably; for a soruer disease cannot befall them; they fear it more then the plague; for usuaily they that have this disease have them in abundance, and for wante of bedding & lining and other helps, they fall into a lamentable condition, as they lye on their hard matts, the poxe breaking and mattering, and runing one into another, their skin cleaving (by reason whereof) to the matts they lye on; when they turne them, a whole side will flea of at once, (as it were,) and they will be all of a gore blood, most fearfull to behold; and then begin very sore, what with could and other distempers, they dye like rotten sheep. The condition of this people was so lamentable, and they fell downe so generally of this disease, as they were (in the end), not able to help one another; no, not to make a fire, nor to fetch a little water to drinke, nor any to burie the dead; but would strivie as long as they could, and when they could procure no other means to make fire, they would burn the wooden trayes and dishes they ate their meate in, and their very bowes and arrowes; & some would crawl on all foure to gett a little water, and some times dye by the way, & not be able to gett in again. . . . But by the marvelous goodness & providens of God not one of the English was so much as sicke, or in the least measure tainted with this disease, though they dayly did these offices for them for many weeks togethether.  

William Bradford, 1651

It is interesting to note that for the earlier epidemics, which took place before the Pilgrims' arrival, Bradford did not mention an Act of God as the cause, as he does here. In the Josselyn quote, he definitely discriminates between the earlier epidemics and the smallpox epidemics and attributes the smallpox to the arrival of the English. Also, he specifically states the English and not disease destroyed the Pequots.

The period from 1604 to 1616 that I am calling “First Contact” encompasses a series of escalating events that changed the relationships between the Europeans and the Indians. Before 1604, New England and Atlantic Canada were areas for exploration and fishing. Some of the explorers wanted to find a convenient way to get through the area and on to better things in Asia. Other explorers wanted to find the gold that the Spaniards found much further south. And the fishermen wanted to catch cod, preserve it, and head back home to sell it.

Beginning in around 1604, the new mindset evolved that “we are here possibly permanently.” They were “frontiersmen” or “pioneers” in some senses of the words;
another term might be “conditional settlers.” At first, coexistence with the Indians still seemed possible, at least to some and under the right conditions. There were no women and children yet, the men saw the possibilities, but were still having problems with the trials and vicissitudes of their new environment. Other realities also set in during these years: No gold, no northwest passage.

The Pilgrims left Europe on the Mayflower in September 1620. There were women and children onboard including three pregnant women. Two passengers died at sea and one baby was born at sea. They arrived in New England in November, not the worst month to arrive in New England, but certainly not one of the best. The plan was to land at the mouth of the Hudson River, but the storms brought them here instead. There was no Thanksgiving feast that November. Over half of the passengers died by spring, and it would have been more if they did not find maize that had been stored by the Indians. It also could have been fewer deaths if there had been direct Indian contact as the Indians had cures for scurvy, which was the most pervasive and lethal disease. At that point though the Indians were keeping their distance from the strange people who had recently brought such bad fortune.

In 1621, the Mayflower returned to England, but all of the Pilgrims stayed behind. This is the year that Squanto met the Pilgrims and directly contributed to their later success. And this was the year for Thanksgiving, thanks to the fortitude of the Pilgrims and to the help of Squanto.

In 1622, Edward Winslow and William Bradford’s “Mourt’s Relation,” presented an inviting picture of the settlement, mentioning that there were deaths during the first year, but not mentioning the 50% mortality rate. From this time to 1630, the success of the Pilgrims then other small separate religious groups made New England attractive for a very different reason; it wasn’t England. At this point, England was an increasingly intolerant and hostile place for Calvinists including the Puritans. Things got even worse for these groups when Charles I became King in March of 1625. By 1630, large, more permanent settlements and even extensive colonization seemed realistic.

The next series of events that further changed the relationships. During the Great Migration from 1630 through 1640 approximately 20,000 colonists came to New England, while 60,000 other emigrants from England went to Barbados, Ireland, and the
Netherlands. They came with families and were here to stay. The land itself, not just the resources on it, became the capital. In addition, Indians were not going to be easily manipulated and exploited. During this period was the change from possible settlement to hegemony, from coexistence to conquest. From the early years of the Great Migration to the Pequot War in 1637 and later, it became increasing obvious that they were here to either subjugate the Indians or send them away on foot or on slave ships.

The other problem for the Pawtuckets and Pennacooks and their neighbors, the Massachusetts, was that starting in the early 1630s there were no more beaver furs to trade, and now the only trading commodity was their land. The Europeans did not see the land as "belonging" to the Indians there were no documents or fences, clearly the way ownership is defined if you are a European. Once the land was gone, having been being cheated, robbed, and chased away, they had nothing, there was no role for them and they held no value in English society.

There was a finite amount of beaver and other furs, and there was a finite amount of land. The European demands for fur and the settler’s demand for land outpaced the supply of both. In economics, competition between groups can reach a tipping point at which the dominant player defines the standard, which results in "winner-take-all" economy. This parallels the "winner-take-all" approach to warfare discussed above.

Massachusetts Bay Colony’s first seal displayed an Indian saying "Come over and help us." Today this can only be seen as irony, even tragic irony. At the time it was justification and rationalization, and not deliberate sarcasm.

The quote on the seal is an allusion to Acts 16:9 in the King James Bible, “And a vision appeared to Paul in the night; There stood a man of Macedonia, and prayed him, saying, Come over into Macedonia, and help us.” In the Geneva Bible, it is “Where a vision appeared to Paul in the night. There stood a man of Macedonia, and prayed him, saying, Come into Macedonia, and help us.”

I mention both passages because the English King preferred the King James Bible while the Puritans likely read the Geneva Bible. The King James Version ended up being paraphrased on the seal. Either way, the idea that the Indians were asking the colonists for help from the Indians is one of the great ironies in world history.
The unidentified pathogens by themselves did not cause the devastation. There were many other triggers and contributing factors to the effects of the 1616 to 1619 epidemics. A series of man-made changes intensified the effects, prevented recovery, and further inundated the survivors. It became an invasion, an occupation, not a passive introduction of unfamiliar microbes. One cannot assess the devastation of the disease or diseases without looking at all of the other calamities befalling the Indians in this short span of time. The diseases were just one factor among many that contributed to a downward spiraling, each one compounding the effects of past events, and leaving the Indians less able to withstand the next crisis.

The word “almost” in the chapter title and in the Gookin quote at the beginning of this chapter points to something that should be remembered as a significant part of the history of the United States. According to Gookin, the Pawtucket “were almost totally destroyed by the great sickness . . . so that at this day, they are not above two hundred and fifty men, besides women and children.” So a half-century after the epidemics and other devastating events, there were still possibly as many as 3,000 Pawtucketts or Pennacooks still living in the area.

We know the names of some of the Pawtucket including Passaconaway, Wannalancit, and their families and descendants. There are also some skeletal remains from the area, artifacts, documents, and oral history. The Pawtucket were not totally destroyed by the great sickness, and we will never know how we could have benefitted from their continued presence and coexistence.

Contact: Wars, Ethnic Cleansing, Diaspora (1634 to 1726/1730)

The influx of Englishmen to the Massachusetts coast led to religious disagreements and the need for more land: Both of which caused groups of people to move to the north, south, and west to establish new settlements. It seems that it was easier to move away from established settlements and make new ones than to live with people with even marginally different religious beliefs and practices. Also, English agricultural practices and animal husbandry meant that more and more acres were needed to sustain the settlers. Timber for building and firewood were also becoming more scarce and valuable.
The other factor that led the settlers into the frontier was trade and that primarily meant beaver pelts. The beavers’ blessing of waterproof fur was now becoming its undoing in the New World, as it had already been in the Old World. Now the Connecticut River was the coveted trade route from the inland to the coast and the Dutch were controlling it.

Not to be outflanked and out-traded, the English built a trading post in 1633 where the Farmington River meets the Connecticut River north of the Dutch trading post, Huys de Hoop (Fort Hope or House of Hope). Then in 1634, the English established a settlement south of the Huys de Hoop. The trading post became Windsor, today’s Windsor, Connecticut, and the settlement became Wethersfield, today’s Wethersfield, Connecticut.

The English arrival to this area increased competition, changed the trading dynamics, and led to increasing and escalating hostilities. The violence was often revenge attacks between the groups; a European killing an Indian to revenge a murder regardless of whether the Indian was guilty or even a member of the same tribe as the killer, or similarly, Indians seeking revenge and not discriminating between the Dutch and the English.

This randomized frontier justice could have led to never-ending chains of retributions. However, it reached the crisis point when an army of Englishmen attacked a Pequot village (Misistuck; today’s Mystic, Connecticut) on May 26, 1637, ostensibly to avenge the killing of some of the traders by Indians and the refusal to turn over the alleged killers. Six to seven hundred Pequots including women, children, and the elderly were killed in a single attack.

This massacre and other events of the Pequot War forever changed the relationship between the English and the Indians. The English had more lethal weapons and they were willing to use them to solve their problems with the Indians.

Increasing amounts of land were needed to grow food and hay for cattle. There was no longer just a city upon a hill. The city extended for hundreds of miles and there was no room in the city for Indians. The spiritual aspirations of the earlier settlers were overtaken by material wants and needs. The Indians were no longer a people to befriend, use, and exploit, they were now a nuisance and were in the way.

While this was going on to the south and west of Boston, the first English settlements on the Merrimack River and the Concord River were being established. In
1635, Simon Willard of Cambridge established a trading post at Musketquid, which became the English settlement of Concord. Simon Willard and others followed the Concord River to the Merrimack River, then followed the Merrimack upriver into today’s New Hampshire.

The next 100 years of history between the Europeans and the Indians defy description. The terms I would use are “ethnic cleansing” and “diaspora.” Whether the Indians wanted autonomy and war or coexistence and peace, their fate was the same. They were as beat up as the Indians in Central and South America had been before them and the Indians in the south, middle, and west of North America would be later.

Here I will mention just some of the indignities and injustices that the Indians in this area suffered over the next 100 years. At this point onward, disease was a significant factor for the Indians only in the same proportion as it was for the colonists. Many Indians survived through this period. These stories are well told elsewhere, and I have quoted some of them below and mentioned others in the bibliographic essay and references for this chapter.

In 1642, Colonial authorities tried to arrest Passaconaway based on unconfirmed reports from Connecticut of possible attacks by unspecified Indians without any mention of Passaconaway or the Pennacooks. According to John Winthrop, in September 1642,

There came letters from the court at Connecticut, and from two of the magistrates there, and from Mr. Ludlow, near the Dutch, certifying us that the Indians all over the country had combined themselves to cut off all the English, that the time was appointed after harvest, the manner also, they should go by small companies to the chief men’s houses by way of trading, etc., and should kill them in the houses and seize their weapons, and then others should be at hand to prosecute the massacre; and that this was discovered by three several Indians, near about the same time and in the same manner; one to Mr. Eaton of New Haven, another to Mr. Ludlow, and the third to Mr. Haynes. This last being hurt near to death by a cart, etc., sent after Mr. Haynes, and told him that Englishman’s God was angry with him, and had set Englishman’s cow to kill him, because he had concealed such a conspiracy against the English, and so told him of it, as the other two had done. Upon this their advice to us was, that it was better to enter into war presently, and
begin with them, and if we would send 100 men to the river mouth of
Connecticut, they would meet us with a proportionable number.

Upon these letters, the governor called so many of the magistrates
as were near, and being met, they sent out summons for a general
court, to be kept six days after, and in the mean time, it was thought fit,
for our safety, and to strike some terror into the Indians, to disarm such
as were within our jurisdiction. Accordingly we sent men to Cutshamekin,
at Braintree, to fetch him and his guns, bows, etc., which was done, and
he came willingly, and being late in the night when they came to Boston,
he was put in the prison; but the next morning, finding upon
examination of him and divers of his men, no ground of suspicion of his
partaking in any such conspiracy, he was dismissed.

Upon the warrant which went to Ipswich, Rowley, and Newbury, to
disarm Passaconamy [Passaconaway], who lived by Merrimack, they
sent forth 40 men armed the next day, being the Lord's day. But it
ruined all the day, as it had done divers days before, and also after, so
as they could not go to his wigwam, but they came to his son's and
took him, which they had warrant for, and a squaw and her child,
which they had no warrant for, and therefore order was given so
soon as we heard of it, to send them home again. They, fearing his
son's escape, led him in a line, but he taking an opportunity, slipped
his line and escaped from them, but one very indiscreetly made a shot
at him, and missed him narrowly. Upon the intelligence of these
unwarranted proceedings and considering that Passaconomy would look
at it as a manifest injury, (as indeed we conceived it to be, and had
always shunned to give them any just occasion against us,) the court
being now assembled, we sent Cutshamekin to him to let him know
that what was done to his son and squaw was without order, and to show
him the occasion whereupon we had sent to disarm all the Indians, and
that when we should find that they were innocent of any such
conspiracy, we would restore all their arms again, and to will him also to
come speak with us. He returned answer that he knew not what was
become of his son and his squaw, (for one of them was run into the
woods and came not again for ten days after, and the other was still
in custody,) if he had them safe again, then he would come to us.
Accordingly about a fortnight after he sent his eldest son to us, who
delivered up his guns, etc.

In 1644, Passaconaway signed a deed putting the Pawtucket under the authorities in
Boston, which were in effect articles of submission to the Colonial government. I have
modernized the spelling in the text of the deed below.

At a general Court held at Boston the 12 day of the fourth month 1644. Passaconaway, Nahnanacommock, did voluntarily submit themselves to us, as appears by their Covenant subscribes by their own hands here following & other articles to which they consented. We have & do by these presents voluntarily & without any constraint or persuasion, but of our own free motion put ourselves, or subjects Lands & Estates under the Government and Jurisdiction of the Massachusetts to be governed and protected [emphasis added] by them, according to their Just Laws and orders so far as we shall be made capable of understanding them. And we do promise for ourselves & all our subjects & all our posterity to be true & faithful to the said Government & aiding to the maintenance thereof to or best ability, And from time to time to give speedy notice of any conspiracy attempt or evil intention of any which we shall know or hear of against the same & we do promise to be willing from time to time to be instructed in the knowledge & worship of God. In witness whereof we have hereunto put or hands that day & year above written.

the mark of Passaconaway the mark of Nahnanacommock

In 1647, the Reverend John Eliot began his missionary work with the Indians in the area near Pawtucket Falls. A log meetinghouse was constructed and used as a courthouse and chapel by John Eliot during his visits. It is believed that this building survived until the 1820s when it was torn down.

The Wheelwright Deed of 1629 is mentioned in some accounts of this time and area as an agreement between Passaconaway and other Sachems and a group of European settlers. Here, I am only referring to the deed dated 1929 that is alleged to have Passaconaway’s mark on it. There are Wheelwright deeds written in later years that are authentic, none of which have Passaconaway’s mark.

There is a great deal of speculation about the authenticity of the 1629 deed, but my reading of the deed and the writings of others about it convince me that the Wheelwright Deed of 1629 is not authentic. A chapter or whole book could be written about the controversy, but I will just mention a few reasons why I came to this conclusion. First of all, it is unlikely that Wheelwright was in North America in 1629. Secondly, the fact that the deed was missing for decades makes it suspect. Thirdly,
Passaconaway’s mark or pictograph on the 1629 does not even come close to matching the one on the authenticated 1644 deed.

In 1652 and 1653, the increasing number settlers moving into the area inspired Reverend Eliot to petition the colonial government seated in Boston to establish a “praying town” for Indian converts to Christianity, referred to as Praying Indians, at Wamesit. This was one of 14 praying towns that were created in Massachusetts. Wamesit was located at the confluence of the Merrimack and Concord rivers, a short distance from the Indian village of Pawtucket, in today’s downtown Lowell. The Wamesit Indians were families from Pawtucket and other Pennacook villages, and possibly other neighboring villages.

In 1655, the towns of Chelmsford and Billerica as well as there nearby town of Groton were incorporated, as the need for land continued to drive the colonists further away from the coast. The map below, drawn around this time, is a graphic example of the Englishmen’s encroachment and the pushing away and squeezing of the Indian communities. The “INDIA LAND” on the map is Wamesit.
Though Passaconaway lived until 1679, he resigned his Sachemship to his son, Wannalancit in 1660. Passaconaway believed that any war with English would end in the Indians’ defeat. In a speech in 1660, which was probably embellished as there is no evidence that he was ever a hostile enemy to the English, he reportedly told his people:

I was as much an Enemy to the English at their first coming into these Parts, as any one whatsoever, and did try all Ways and Means possible to have destroyed them, at least to have prevented them sitting down here, but I could in no way effect it; . . . therefore I advise you never to contend with the English, nor make war with them. Passaconaway

A ditch was dug around the Wamesit village in 1665 to separate it from Chelmsford. This was intended as a symbol of autonomy and survival, which in the end meant nothing. In 1669, Wannalancit had his people build a palisaded village on Fort Hill for protection against potential Mohawk attacks, as his people were too weakened to protect themselves and the colonists’ promise of protection in the 1644 deed never materialized. This area of Lowell is still called Fort Hill.
The bloody King Philip's War was fought between the colonists and some allied Indians and the Indians during the years 1675 to 1678. Although the Wamesits and Pawtucketts did not take up arms on either side, the war caused more damage to their lives and lifestyles.

The quotes below from Charles Cowley’s 1862 book recount four incidents that took place during this time even though the Indians involved were not belligerents before, during, or after King Philip’s War. I have separated Cowley’s text into the four events.

In September, 1675, shortly after the opening of the campaign, a hundred armed scouts, under Captain [Samuel] Mosley [also Mosely and Moseley], marched up the Merrimack to Pennacook, where Concord now stands, and where Wannalancet sometime took up his abode; and finding the wigwams and with the stores of Indian sea a deserted, wantonly burned them.

About the same time, a haystack in Chelmsford, belonging to Lieutenant James Richardson, was burned by some skulking Indians of Phillip’s party. But the inhabitants at once attributed to the Wamesit Indians, though the owner of it protested that it could not have been set on fire by them. Hereupon, Count Oakes, with a body of troops was ordered to bring all the Wamesit Indians to Boston. On the twentieth day of October, he accordingly sent word to the General Court that he had arrested the Indians of Wamesit—about a hundred and forty-five in number—and had them with him on the way to Boston. Thirty-three of them were able-bodied men unarmed. The rest were old, decrepit then, women, children and infants. Many of them were naked, and all destitute of food. The General Court now ordered all the old then, women and children to be returned to their homes. The others were carried to Boston, with three of them were sold as slaves. The rest after being kept for some time in prison in Charlestown, were found innocent of setting the haystack on fire, (though the House of Deputies had passed a vote declaring them guilty;) and they were returned to Wamesit, escorted by Lieutenant Richardson, the owner of the property destroyed.

While on their return home, an incident occurs which shows the brutality of some of the colonial population. They happened to march through Woburn while the train-band was exercising; and Knight, one of the company, deliberately leveled his gun, and shot one of the Indians dead.
For this cold-blooded murder he was indicted and tried by a jury of his peers, but pleaded “that his gun went off by accident;” and as “the witnesses were mealy-mouthed in giving evidence,” the jury, though “sent out again and again to by the judges, who were much to satisfy,” basely returned a verdict of acquittal.

Not long after this, a barn filled with hay and grain, the property of this Lieutenant Richardson, was burnt to the ground. The perpetrators of this incendiary act, as the proprietor of the barn then thought, and as was afterward ascertained, were not of the Wamesit Indians, but were partizans of Phillip. But the scoundrel mob of Chelmsford persisted in charging it upon the Indians of Wamesit and “took the law into their own hands.” On 15 November, 1675, fourteen armed men from Chelmsford came to Wamesit, and called the Indians, who were chiefly helpless women and children, out of their wigwam; but no sooner and they appeared than two of the Chelmsford ruffians, named Lorgin and Robbins, fiendishly fired upon them two charges of buckshot. Five of the Indian women and children were wounded; one of them, a little boy, the son of a chief, was killed. The murderers was subsequently indicted and tried for this crime; but in this, as in the other case, the jury were dominated by the popular prejudice against the red men. “To the great grief and trouble generally of magistracy and ministry, an other wise and godly men,” says Gookin, these wanton murderers were acquitted. Charles Cowley, 1862

Another incident from this period was related by Alfred Gilman in 1884:

In a letter dated October 16, 1675, [Captain Samuel] Mosely and his men captured a squaw and thus describes her fate: “This aforesaid Indian was ordered to be torn to pieces by dogs, and she was so delt with.” Humanity shudders at this avowal.

Taking into consideration the school in which these warriors were educated, and the times in which they lived, we ought to make allowances for their fears, prejudices and actions. Even Mosely felt it necessary to apologize to the Governor for his course, as he says in a letter dated October 5, 1675: “I desire to be excused if my tongue or pen has outrun my wit, being in a passion and seeing what mischief had been done by the Indians, which I have been eye-witness to, would make a wiser person than I am willing to have revenge of any of them”. Alfred Gilman, 1884

Mosely’s letter does not sound like an apology to me, but an excuse and a
justification. It is a sad example of the wanton and arbitrary nature of the revenge killings that fueled the war.

After these incidents the Wamesit retreated to the forests to the north for protection. When they returned in the spring of 1676 they found that the colonists had taken over their planting grounds and planted their own crops.

These three years, as a percentage of the population, were the deadliest in New England history with huge casualties on both sides of the war. King Philip was killed on August 12, 1676 ending most of the battles, although there were battles to the north until a peace treaty was signed in 1678. King Philip was beheaded, and drawn and quartered. His head was displayed on a pole in Plymouth for 20 years.

Daniel Gookin lamented that “many and great mischiefs might have been (according to reason) prevented” and outlined actions that “with the blessing of God, might have prevented the desolations and devastations that afterward ensued.”

The situation of those towns was such, that the Indians in them might have been improved as a wall of defence about the greatest part of the colony of Massachusetts; for the first named of those villages bordered upon the Merrimack river, and the rest in order about twelve or fourteen miles asunder, including most of the frontiers. And had the suggestions and importunate solicitations of some persons, who had knowledge and experience of the fidelity and integrity of the praying Indians been attended and practised in the beginning of the war, many and great mischiefs might have been (according to reason) prevented; for most of the praying towns, in the beginning of the war, had put themselves into a posture of defence, and had made forts for their security against the common enemy; and it was suggested and proposed to the authority of the country, that some English men, about one third part, might have been joined with those Christian Indians in each fort, which the praying Indians greatly desired, that thereby their fidelity might have been better demonstrated, and that with the assistance and company of some of those English soldiers, they might daily scout or range the woods from town to town, in their several assigned stations, and hereby might have been as a living wall to guard the English frontiers, and consequently the greatest part of the Jurisdiction, which, with the blessing of God, might have prevented the desolations and devastations that afterward ensued. This was not only the suggestion of some English, but the earnest desire of some of the most prudent of the Christian Indians, who in all their actions declared that they were greatly ambitious to give
demonstration to the English of their fidelity and good affection to them and the interest of the Christian religion, and to endeavour all that in them lay to abase and take off the animosity and displeasure that they perceived was enkindled in some English against them; and hence it was that they were always found ready to comply cheerfully with all commands of the English authority. But such was the unhappiness of their affairs, or rather the displeasure of God in the case, that those counsels were rejected, and on the contrary a spirit of enmity and hatred conceived by many against those poor Christian Indians, as I apprehend without cause, so far as I could ever understand, which was, according to the operation of second causes, a very great -occasion of many distressing calamities- that befell both one and the other. Daniel Gookin

In 1685, 50 colonists from Chelmsford purchased Wamesit. Some of the remaining Indians in the area might have lived on Fort Hill until 1714 when that land was sold and the Indians were left with only hunting and fishing rights on the land. A small community of about 60 Indians might have also lived on Wickasee Island for a while after 1685. In 1726, Wamesit was annexed to Chelmsford.

Wannalancet lived with Colonel Jonathan Tyng, one of the 50 Wamesit purchasers, for the last four years of his life until his death in 1699. While living in Tyng's mansion, it was said that he spent a great deal of time looking at the Merrimack River and across to Wickasee Island. It is reported that he is buried in the Tyng Family Cemetery.

Some Pennacook communities existed along the Merrimack River as late as 1730, though most of the Pennacook joined with the Abenaki in Maine and the St. François in Quebec. Some accounts mention small numbers of Indians in the area living here or visiting into the 1800’s.

Aftermath

“the relics of a race”

Everywhere in our corn and grain fields the earth is strewn with the relics of a race, which has vanished as completely as if trodden in with the earth. When I meditate on the destiny of this prosperous branch of the Saxon family, and the exhausted energies of this new country-I forget that what is now Concord was once Musketaquid, And that the American race has had
its history- The future reader of history will associate his generation with the red man in his thoughts, and give it credit for some sympathy with that race. 

*Henry David Thoreau, 1842*

Many of us, me included, have collectively and culturally employed a variety of unconscious or subconscious psychological defense mechanisms, such as denial, minimization, projection, and rationalization, to push this period of our history out of our history. Even if we do not agree that defense mechanisms were at work, we still can acknowledge that these events have been pushed in large part from any conscious scrutiny. At a more conscious level, cognitive dissonance has caused us to create a comfortable illusion for ourselves or, more commonly, buy into the comfortable illusion that was created by others. The first Thanksgiving is a much nicer story than King Philip’s War; so it is the one we remember.

Beginning in 1492, in what has been termed the “Columbian Exchange,” plants, animals, and germs crossed from the Old World to New World and vice versa. Old World to New World diseases included bubonic plague, chicken pox, cholera, diphtheria, influenza, leprosy, malaria, measles, scarlet fever, smallpox, typhoid, typhus, whooping cough, yellow fever, and yaws. Old World to New World animal vectors for pathogens included chickens, cows, pigs, and rats. New World to Old World diseases included bejel, Chagas disease, pinta, and possibly syphilis or a previously unknown strain of syphilis.

Virgin soil explanations are partly correct and they do remove the blame from the Indians. However, when used alone, they ignore the factors that were controllable. Many otherwise very good accounts of this part of history will state something to the effect that Indians were wiped out by diseases introduced by Europeans because they had no immunity to them with no further explanations. These explanations minimize the killing, kidnapping, stealing, and ethnic cleansing that contributed to the devastation of the Indians in New England, and ignore the fact that there were many survivors.

The mental and physical distress, and economic chaos caused by the European settlers reduced immunity to, exacerbated the effects of, and prevented recovery from disease. In other words, these diseases were not the sole cause of the devastation. Other factors including social causes (economic and political), biological causes (ecological and physiological), and psychological causes (intrapsychic and spiritual), acted and interacted to
cause the devastation. Diseases significantly weakened the Indians, but it did not annihilate them. Some did live on and could have stayed in their homelands and many more could have survived and contributed to the well being of everyone.

Thoreau noted that, as of 1873, “The graves of Pasaconaway and Wannalancet are marked by no monument on the bank of their native river.” (This is the spelling of Passaconaway used by Thoreau.) Although their graves are not marked, there are some monuments to them today, which I discuss in the bibliographic essay.

As mentioned earlier in the chapter, most of the archeological record is lost. According to Cowley,

From the number of human bones exhumed within the last twenty years in the territory embraced within the Lowell Cemetery, it is evident that the spot was a favorite burial place of the Indians long before the waters of the Merrimack had murmured in the white man’s ear. In 1858, when the hill which once overlooked the Concord was pared down, a large human skeleton was found, which was supposed to be that of an Indian chief, being carefully embedded in a substance resembling charcoal. It was apparently buried in a sitting posture, facing the rising sun. The skull bore indications of fracture with a tomahawk. Near it was found the skeleton of a woman, perhaps the chief’s squaw. *Charles Cowley, 1862*

The Peabody Museum of Archaeology and Ethnology at Harvard University has some skeletal remains of Indians that were unearthed in the Lowell area. These remains are fragmentary and almost all craniodental. While the age of them is unknown at this point, they have been identified as Indian based on cranial and dental morphology. The bone fragments are not on display because of their age and condition.

The Native American Graves Protection and Repatriation Act (NAGPRA) requires federal agencies and institutions that receive federal funding to return Indian "cultural items," including human remains and funerary objects, to lineal descendants and culturally affiliated tribes. While there were Indians from this area who survived and likely produced descendants, there does not appear at this point to be any identified as lineal or from tribes identified as culturally affiliated.
Many of the Europeans hated the Indians lifestyle and they could not understand or tolerate the idea that the Indians would not embrace the European worldview. They were incompatible ontologies, and lifeways that could not exist together while the Europeans wanted more and more land and timber. The treatment of the beaver population serves as examples of the European and Indian approaches.

It was not primarily the settlers in this area who are to blame or even all of the settlers in New England who are to blame for the ethnic cleansing and diaspora. Some of the Europeans who settled in Boston, Plymouth, and other parts of the colony were “hell-bent” (though they would not approve of this term) on removing the natives and dominating the land. Rogue settlers and skulking Indians, angry and vengeful, created cycles of retribution that the Europeans used to justify genocide. There were repeated episodes of ‘frontier justice” as this was at that time the frontier. The extreme actions of a few escalated the violence to the point of winner-take-all battles and wars.

Even if we determine the cause of the epidemics, it will not change what happened. It did not have to be as devastating as it was and it did not have to mean the end of a people. The importance of the epidemics for us today is not its cause; it is its effects and our understandings of its causes and effects. What must be remembered is that disease and the interpretations of the survivors profoundly affected our history from the onset of the epidemics to today.

We must be one as the English are, otherwise we shall all be gone shortly, for you know our fathers had plenty of deer-skins; our plains were full of deer, as also our woods, and of turkeys, and our lakes full of fish and fowl. But these English have gotten our land, they with scythes cut down the grass, and with axes fell the trees. Their cows and horses eat the grass, and their hogs destroy our clam-banks, and we shall all be starved. Miantonomo, 1642

With the execution of the foregoing [1714] deed the Indian ceased to be a factor in the life of Wamesit Neck, as the neighborhood was now called. The remaining aborigines doubtless were absorbed in general population. It is related that one Indian family was resident in the northern part of Dracut toward the end of the eighteenth century and that two or three men of the race were regularly employed to guide rafts of logs over Pawtucket Falls. How long a few Indians continued to come periodically to Pawtucket Falls would be hard to say. The wandering red men who were noted in the
vicinity from time to time even after the founding of the village of Lowell may or may not have had any racial connection with the Wamesits and Pawtuckets. The Indians, certainly, had not entirely disappeared even toward the middle of the nineteenth century. If we may credit a writer in the Operatives' Magazine for February, 1842, who says: "The Pawtucket Falls and their immediate vicinity were formerly the favorite resort of the Indian tribes of the surrounding country, and annually a small and degraded band of their posterity still visit the place, pitching their tents a few rods below the falls, where they remain till the autumnal winds remind them that cold winter is near, and they must away." Frederick William Coburn, 1920