

EPIDEMIC CHOLERA

Rochester, 1833

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by

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"Above all, record the epidemics of every season. Such records, if published, will be useful to foreigners and a treasure to posterity."

--Benjamin Rush

Rush, B., Observations on the Duties of a Physician and the Methods of Improving Medicine; Medical Inquiries and Observations, 3rd Edition, Vol. I, Philadelphia, 1809.

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S E C T I O N I

I N T R O D U C T I O N

PREFACE

"Seldom have we communicated news of deeper interest than is embodied in this..paper. The pestilence so fatal to life in Asia and Europe is now on our shores and may, ere long, be desolating our homes. Its progress through Quebec and Montreal forbids the supposition that we shall be long exempt. The Rubicon is passed--the barrier interposed by the Atlantic is destroyed--and can it be believed that the MYSTERIOUS SCOURGE which has swept like the Siroc over two continents and traversed an ocean, can be stayed in its desolating career till measurably glutted in the New World?"<sup>1</sup>

It was on a Tuesday, June 19, 1832, that the 10,000 people in the Erie canal village of Rochester read the above newspaper account first learning that the dread Cholera, which had relentlessly traversed Europe from its Asian cradle, was now within striking distance of their own homes. In fifteen years, the Cholera had transcended its endemic Asiatic boundaries and invaded, from Persia and Near Eastern trade cities, Russia and Poland, then Germany, England and France. Like a Mongol horde, it moved along rivers and trade routes infesting and destroying hundreds, thousands within a fortnight of its appearance, moving on to more destruction, or suddenly doubling back to attack a city thought, presumably, to have escaped.

Unique among the great epidemic diseases in its methodical, almost predictable advance from place to place, terrifying to those who lived in its destructive path, Malignant Cholera, as it was called, presents an intriguing history. Pamphlets and treatises by the score were composed by lay and medical persons throughout the

1. Rochester Daily Advertiser, June 19, 1832.

world setting forth elaborate causal theories, methods of treatment, and multitudinous means of prevention of the disease. In dealing with the broader concepts, the specious theories, the diverse epidemiologic ideas, the history of the individual city's struggle to cope with the disease, its fears, and its problems has been, unfortunately, ignored.

The problems of quarantine, sanitary and isolation measures, of the formation and administration of a Health Department (in 1832 virtually unknown to American cities), of the reactions of a town to a disease with known high attack mortality rates--of these things, little has been written.

The city chosen for discussion is Rochester, N.Y. in no way unique among the cities attacked but representative of most American semi-frontier towns of the 1830's. Focusing eventually on this one community, I shall reconstruct the progression of the first global Cholera epidemic including certain concepts of the disease at that time, and a prefatory brief sketch of Rochester in the early 1800's. This material is dealt with somewhat extensively to provide the background fact and information upon which was based the reaction of a city in the year of the Cholera, 1832.

SECTION II

CHOLERA, THE DISEASE

## TERMINOLOGY

The disease, Cholera, as we commonly know it today, has had protean names, ranging from the descriptive Russian "Chornaia colezn" or black illness,<sup>1</sup> referring to the cyanosis attendant, and the Hindu "Vishuchi" or "Vishuckhiki", signifying vomiting or purging, to the colorful Bagdad "Hauuwa", meaning tornado,<sup>2</sup> and the French "Mort de Chien" or dog's death.<sup>3</sup> Throughout the western world prior to 1830, diarrhea marked by excessive bile in the evacuations, pain in the epigastrium, coldness and fainting,<sup>4</sup> had long been collectively categorized by the single term "Cholera Morbus". The word was derived from ancient Hippocratic writings from the Ionian a compound of (bile) and (I flow), for it was believed that the increased evacuations were caused by excessive bile secretions. The Greeks added the term meaning "disease", which, finally translated into Latin, arrived as the term Cholera Morbus.<sup>5</sup>

When the highly epidemic and fatal diarrheal form from India was observed by the English, they saw a certain similarity between the various diarrheas already well-known to Europe and the epidemic Indian diarrhea; they simply termed the Indian form "Cholera Morbus".<sup>6,7</sup> It was not until further observation of the disease in European habitat that physicians realized that an error had been made -- that this was not at all like anything they had heretofore seen in Europe. Hence, a great profusion of terms more to describe the Indian diarrhea,



the most common of which were "Asiatic" or "Indian Cholera", also "Spasmodic Cholera", and "Malignant Cholera" (passim). However, the terms "Serous Cholera", "Cholera Asphyxia", "Epidemic Cholera", "Algid Cholera", "Blue Cholera" and "Cholera Pestifera" were all used at one time or another. The diarrheas which they had previously known they now termed "Simple Cholera", "Sporadic Cholera", or "Cholera Morbus", and almost any infant diarrhea as "Cholera Infantum".<sup>8</sup> The terminology damage was done, however, and for two years Cholera Morbus was a term applied variously to mean "virtually any diarrhea" and "Asiatic Cholera".

Gradually, Cholera or Vibrian Cholera (from the name of the organism, *Vibrios comma*) has come to be recognized as the name of the diarrheal disease caused by the *Vibrios comma*, though it is quite evident that the original meaning of the word "cholera", signifying an excessive bile flow, is quite unrelated to the disease process.

## SYMPTOMATOLOGY

The most communicative and vivid observations on the symptomatology are to be found in the many writings of those physicians who first observed the disease. The following is a synthesis of the observations of three observers (in abstract):

"The invasion is insidious..... the patient...may admit that he is unaccountably listless. He has tormina of the bowels, and an uncomfortable sensation of heat at the pit of the stomach. He has one or more unnatural alvine discharges. The first of these is characteristic; there is a sudden call, and the whole intestines seem to be emptied at once, followed by a feeling of weakness.

"The fluid which is passed from the stomach and bowels is either homogenous or turbid; like water in which grain has been boiled, with pieces of opaque white or yellowish coagulated matter floating in it.

"Their discharges are made with ease, and almost without the volition of the patient. The stomach or bowels are emptied with some violence. These cramps are always very painful and are most dreaded by the patients.

"The pain causes the most courageous to make noisy outcries and to roll about as if frantic. Vomiting gives relief, and many desire and provoke it. The vomitings go on, continually increasing, with compression of the epigastrium, and difficulty of breathing. With these symptoms come cramps in the limbs and jaws and sometimes in the muscles of the eyes."

"Soon, the eyes are completely sunk in the sockets, the whole countenance is collapsed, the skin is livid; the aspect of the patient is hideous.

"The secretion of urine fails. The surface is covered with a cold sweat, the nails are blue, the skin of the hands and feet is corrugated, as if they had been long steeped in water.

"The pulse, if not ceased, becomes barely perceptible, and the heart beats feebly. The breathing is slow and oppressed.

"In the last stage, the evacuations have most likely ceased; the eyes completely sunk in their orbits, are glazed and flaccid, turned upwards and half-covered with the eyelids; the spasms are now commonly at an end; the whole body is that of a corpse, and the action of the heart is a mere flutter. The skin is like that of a "damp hide".

"The condition of the mind is remarkably collected during the whole progress of the terrible illness. As the fatal event approaches, the only wish the patient seems to have is to be allowed cold water, and to be left to die in peace."<sup>9,10</sup>

More technically, the effects produced are initially a profound dehydration with a resultant acidosis since the fluid losses from the rectum far exceed those lost in vomitus. Accompanying severe dehydration, the blood viscosity becomes markedly elevated, which is instrumental in producing cyanosis, decreased blood pressure, and reduced cardiac output. With this alteration of the cardiovascular system, the patient not infrequently goes into shock terminally; or, if initially recovering, may subsequently die after several days from the anuria or oliguria resulting from decreased blood flow through the kidneys.<sup>11</sup>

## ETIOLOGY AND EPIDEMIOLOGY

Theories pertaining to the etiology and epidemiology of Cholera were legion during the first world epidemic, and ranged from the exotic to the ludicrous. A simple listing of suggested causes is, I believe, both adequate and self-descriptive. The most widely held idea was that it was due to putrid miasma,<sup>12</sup> noxious effluvia, etc., which ideas was supported by the frequently concomitant findings of a Cholera epidemic and a marshy or swampy area,<sup>13</sup> or a canal.<sup>14</sup> Others, however, attributed the disease to such as an excess of carbonic acid in the air;<sup>15</sup> various atmospheric aberrations of light, clouds, etc.;<sup>16</sup> bad soil;<sup>17</sup> uncognizable changes in the atmosphere;<sup>18</sup> fermentative gaseous interaction between an inactive Cholera principle and a soil principle;<sup>19</sup> usual summer cramps and sweating internalized to the bowels; smell of Choleric discharge; and heavy air which settles, becomes compressed, condensed, and virulent.<sup>20</sup>

Just following the United States epidemic of 1832-1834, Drs. Daniel Drake and J. K. Mitchell, in a discussion of the "Crytogamic Origin of Disease" hypothesized that Cholera poison was, in actuality, a micro-organism.<sup>21</sup> In 1838, Boehm, in Germany, described various forms of growth seen in Cholera stools and further noted that post-mortem examinations showed the bowel to be teeming with vegetations of micro-fungi.<sup>22</sup> Numerous observers subsequently claimed to have found Cholera organisms and characterized them variously as cocci, rods,

elongated threads, chains of rods, beaded threads, etc.<sup>23</sup>

A Dr. Budd of Bristol, England, in 1849 made some very prophetic suggestions that the disease was dependent on a living organism, which, being swallowed, became infinitely multiplied within the alimentary canal, thus setting up an action which produced the diarrhea and other symptoms of Cholera. He further postulated that the organisms were disseminated by contact with food, but especially through the drinking water of infected places.<sup>24</sup> The suggestion that impure drinking water was a significant factor was, however, alluded to as early as 1817 by Dr. James of Jessore, India, but only incidentally listed and as quickly dismissed.<sup>25</sup>

Quite literally, a scientific battle of theories raged throughout the nineteenth century, both previous to and, even more so, subsequent to Dr. Robert Koch's distinguished observations and experiments. Koch's work was, in part, anticipated by a number of investigators including the eminent Nedswetzky<sup>26</sup> and Pacini<sup>27</sup>, but strong doubt exists that the comma bacillus was, in effect, described by any prior to Koch, with the possible exception of Pacini.

Dr. Koch was sent to Egypt in 1883 and to France in 1884 as head of the German Cholera Commission to investigate the Cholera epidemics there. His findings were reported at the Berlin Cholera Conference, July 26, 1884, in great detail. The observations made and experiments undertaken are classic, the work meticulously thorough. In short, he demonstrated

almost beyond doubt the etiology of the Asiatic Cholera. In over 100 autopsies, he was able to demonstrate the very characteristic bacillus in each:

"These bacteria, which I have called comma-bacilli, on account of their peculiar shape...can be cultivated in meat broth. It is seen that the comma-bacilli move in a very lively manner. When they are collected together...and moving about among one another, they look like a swarm of dancing midges."

He grew them on a number of media and demonstrated the effects of various agents upon their growth. He investigated the flora in all forms of diarrhea, and showed that the organism was demonstrable in none save the Cholera. He attempted to infect animals wholly without success, but was able to demonstrate the presence of organisms in almost pure culture in the "mucous substance" of Cholera linen. The best demonstration of its transmissibility from man to man came from work he did in India.

"I succeeded in finding comma-bacilli...in a tank that supplies water for drinking and household purposes for all the people living around, in the immediate neighborhood of which a number of fatal cases of Cholera had taken place. It was later shown that the linen of the first person that had died of Cholera in the neighborhood...had been washed in the tank. (This is the only time that I have as yet been able to find the comma-bacillus outside the human body.) Such a tank supplies those who live close to it with water for drinking and household purposes...the Hindoos bathe in it every day, they wash their utensils in it, the human faeces are by preference deposited on its banks, and when a hut is provided with a cesspool it drains into the tank. When the comma-bacilli were first found in tolerably large numbers...the epidemic had already reached a maximum. A short time afterward when only isolated cases occurred the comma-bacilli were only to be found at one spot, and in small numbers.

"It can be assumed that, of a number of people exposed to Cholera infection, only a fraction of them fall ill, and..."

"...these are almost always those already suffering from some kind of digestive disturbance."

In this same report, he proceeds to describe the greater prevalence of the epidemics in regions which are swampy, have high rainfall, and are relatively warm, which factors, he suggests, have favorable influence on the extra-human growth of the bacillus.

Factors of immunity he believed to be present but only for relatively short periods of time in an individual.<sup>28,29</sup>

The report of Koch, is, indeed, a classic and in toto virtually unchanged today. The question of the water transmission of the disease, he later took up on a comparison of the epidemic spread of the disease in the adjoining towns of Altona and Hamburgh, and here he found very clear evidence of the importance of water transmission, from the very severe epidemic which raged in the town without filtered water and the relatively mild nature of the epidemic in the town that had filtered its water.<sup>30</sup>

The name "comma-bacillus" given to the organism by Koch was very soon altered to *Vibrios comma*, the name by which it is known today, at the suggestion of the English Cholera Commission who felt it was "more correctly known as a *vibrios* rather than as a *bacillus*".<sup>31</sup>

## PREVENTION AND TREATMENT

While the subject of what caused the Cholera was one of wild and vivid speculation, throughout the nineteenth century, there was fairly general uniformity of opinion concerning certain precipitating factors which favored the development of the disease in a particular area and in individuals in a Cholera epidemic region. Most of these concepts find acceptance today as predisposing factors:

1. Susceptibility of those with irritable bowels --  
     from various infective diseases,  
     from medicines,  
     from green fruits, etc.,  
     from bad foods;
2. Debilitated persons --  
     alcoholics,  
     elderly,  
     poor nutrition,  
     venereal excesses and debauchery;
3. Crowded, filthy conditions;
4. Gathering of crowds;
5. General factors predisposing to illness --  
     wet clothes, etc.

Of course, there were the bizarre:

1. Abstinence from all fruits and farinaceous vegetables;
2. Heat of the sun and coldness of the nights;
3. Northerly winds (in India);
4. Eating after washing in cold water;
5. Sleeping in the open air;
6. Ocean winds loaded with salt and nitre;
7. Muffling of the breath in the company of others.

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Today, preventive measures include the general factors of good health and nutrition, though the principle emphasis is, of course, on better sanitary facilities and the boiling and chlorination of impure water. Transmission of the disease via raw food is well-recognized, and raw food consumption in



Cholera areas is contra-indicated. A vaccine containing killed organisms has been developed; this is now extensively used by the Army as it confers partial immunity for a period of three to six months.

The treatment of Cholera in 1832 was principally that of purging and bleeding and will subsequently be discussed. Today, treatment in the form of parenteral fluids and chemotherapy has proved extremely successful in the control of the disease.<sup>33</sup>

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S E C T I O N   I I I

C H O L E R A

A S I A T I C   I N   O R I G I N

M A L I G N A N T   I N   S P R E A D

The history of Cholera may be dated to the earliest writings of its endemic Indian cradle and it is virtually a certainty that Indians suffered and died from its lethal attack long before there were scribes to record its awful presence<sup>1,2</sup>.

Western medicine includes a discussion of "Cholera", a diarrhea, as far back as Hippocrates and Aritaes of Cappadocia<sup>3</sup>, but not enough is described for us to know whether the Cholera which they describe was the rapidly fatal epidemic Asiatic or Vibrioid Cholera, or some other devious diarrhea caused by the Salmonella, Shigella, or others.

Man has always been plagued by a variety of agents causing gastrointestinal symptoms, and to distinguish the one form from another in retrospect over centuries might seem difficult. It is, however, the vibrios Cholera which, by its cardinal epidemiology, stands out so starkly, for no other disease of its nature has proven so rapidly fatal, so highly epidemic, and so uniquely peculiar in its irresistible, progressive movement from city to city, from people to people.

It is doubtful that the disease extended beyond its Asian boundaries previous to the early 19th century. The Cholera described in London, Paris, and other European cities in the 17th and 18th centuries by Sydenham, Huxham, Brady and others<sup>4,5</sup>, has since been thought to be the milder Salmonella enteritis. Other records of the disease, so-called Cholera, outside of India do not show the extreme high morbidity and mortality so notable when the Vibrios Cholera established itself in locations with primitive water, sewage, and general sanitary conditions prevailing. The possibility that less virulent forms were known in

Europe previous to the 19th century seems improbable from the various descriptions of the disease as it occurred in India during identical 17th and 18th century periods.

Lebeque de Presle states that in 1762 in Upper Hindustan, 30,000 blacks (Indians) and 800 Europeans died<sup>6</sup>.

M. Sonnerat in his travels in India (1774-1781) wrote that Cholera prevailed epidemically on the Coromandel coast, at one period assuming a very malignant character, destroying above 60,000 people<sup>7</sup>.

In earlier records, Gasper Correa, an officer of Vasco de Gama, wrote that in 1503 in Calicut, on the southwest Indian coast, 20,000 men died of a disease which "struck them suddenlike in the belly", so that they died in eight hours. In 1545 he met with the same disease at Goa, further up the west coast, when it was called Morexy: "the very worst kind of poison seemed to be in operation; as was proved by the vomiting, with great drought for water, as if the stomach was parched up; by the cramps that fixed in the sinews, with pain so extreme that the sufferer seemed at the point of death and the nails of the hands and feet becoming 'black'".<sup>8</sup>

What, then, prevented the egress of Cholera beyond Asia before the 19th century and what factors promulgated its spread early in that century? As has been noted, first, the disease has a very brief incubation period; second, it is transmitted with lightning rapidity through water and sewage systems to infect a large population exposed within a very short time; third, it persists in the infected individual

for only a relatively short time so that he either dies very soon after infection or soon regains his health, not long remaining a carrier of the disease. Thus, before widespread dissemination of the disease could occur, it was necessary for either (a) an infected individual to travel rapidly enough before recovering or dying to transmit the disease to others, or (b) a group of infected individuals to progressively infect each other over an extended trip such that infected individuals arrived at the distant destination.

In the early 1800's, more rapid marine transportation combined with increasing movements of troops and pilgrims within India and to and from the Far East brought together the necessary reagents in a combination sufficiently potent to transport the disease to and throughout the western world until the first great epidemic finally sputtered to a close in 1834. A closer view of the events and the progress of the disease takes us to India.

Throughout the 16th, 17th and 18th centuries, Europeans brought back from Asia numerous accounts of the "Morexy", "Hachaiza or Haiza"<sup>9</sup>, "Mordexin"<sup>9</sup>, "Nirouben"<sup>10</sup>, "Mort de Chien"<sup>11</sup>, as it was variously called, occurring in scattered Indian locations, notably along the southwest coast, in central India, and particularly about the mouth of the Ganges. Certainly, Cholera epidemics were common, for an early account by the Englishman, Macnamara, states, "there is a temple to Oola Beebee, or the Goddess of Cholera, near Calcutta, in 1720, which is visited by pilgrims every Tuesday and Saturday, especially from April to June in Cholera times".<sup>12</sup>

In all, ten epidemic outbursts were reported in India over a 300 year period beginning in 1500<sup>13</sup>. However, since few Europeans lived in India, and since an Indian medical board was not formed until 1781 (which did not publish any reports until 1818)<sup>13</sup>, scant attention was paid to this little publicized disease<sup>14</sup>. By and large, the western world regarded the epidemics as just another facet of the exotic, slovenly East.

Premonitions that a drastic spread of Cholera was possible were felt in the Indian epidemic of 1781. A great pilgrimage involving several hundred thousand Hindus was made every twelve years to Jugger-naut shrine<sup>15</sup>, at Puri, a holy spot south of Calcutta<sup>16</sup>. In this particular year, thousands of Indians were reported to have died from the disease while on the pilgrimage, and not long after severe epidemics spread across India north to Calcutta and south toward Madras along the various travel routes taken by the returning pilgrims. Lesser pilgrimages to Arcot and Vellore (near Madras) in the south and others to Allahabad and to Gaya (south of Benares) in the north, further abetted the disease spread<sup>17</sup>.

Colonel Pearse's army of 5,000 English and Bengal troops contracted the disease near Puri at Ganjam. He reported, "Death raged in the camp with a horror not to be described, and all expected to be destroyed by the pestilence." Over 500 died, but the army, after but a three day pause in their march, proceeded south toward Madras transmitting the epidemic with them<sup>18</sup>. This report is notable for it is the first record of any army being instrumental in carrying the disease to habitations on its

line of March. Later, it will be evident that this method of propagation was important to the epidemic spread of Cholera; it is reported that almost every Indian army camp was attacked by the disease<sup>19</sup>.

Succeeding by two years the pilgrimage to Puri, was a great pilgrimage to Hurdwar in northern India, a place significant in its location along the great caravan routes reaching India from Russia and Persia. 1783 was the year of this pilgrimage on which an estimated 20,000 Indians died of Cholera within an eight day period<sup>20</sup>, many of the reported one to two million pilgrims<sup>21</sup>, again acquiring the disease and transporting it to various parts of India infected just two years previously.

This previous epidemic is to be noted, for the beginning of the 1817 epidemic soon to sweep over the world was a counterpart of this one of 1783. And, notably, the year 1817 coincided with the year of the Puri pilgrimage. Various northern parts of Bengal had in that year previously acquired the disease, according to reports<sup>22,23</sup>, but until it commenced in Jessore, the oft-reported "cradle of Cholera"<sup>24</sup>, a city east of Calcutta, little more than the usual attention was paid to the disease. However, Jessore, located in this same low, wet country embracing the mouth of the Ganges, was heavily infected in August, 1817<sup>25</sup>, and over a two month period more than 10,000 were reported to have died. Little time elapsed, however, before other cities were heavily afflicted. Calcutta, lying but a few miles distant, was so severely struck, that a note was written to Jessore suggesting that Jessore, in comparison, was having only the usual seasonal epidemic<sup>25</sup>.



Calcutta had apparently been relatively free of the disease for it is stated that the general hospital for Europeans in Calcutta had not treated a case in the preceding ten years, demonstrating further the probable importance of the Puri religious festival.

Beginning in September, 1817, 36,000 in Calcutta were attacked over a three month period<sup>26</sup>. The disease spread like a great cancer over a 200,000 square mile area<sup>27</sup>. In the space of four months, the pestilence had already overrun a great part of lower Bengal. At Sylhet, of 19,000, 10,000 acquired the disease<sup>28</sup>. In the 1,300,000 inhabitant district of Nuddea, 16,500 died<sup>28</sup>. It is stated: "The invasion was so sudden that the roads were covered with the dead and the dying, who had not time to regain their tents or houses. Men mounted on horses were seen to fall from them, unable to rise again."<sup>29</sup> In this year, Cholera extended in every direction from Jessore to a distance of 250 miles. It was supposed that 600,000 in 32 cities died that year. In November, the Marquis of Hastings, moving south with his grand army of 10,000 English and 70,000 natives was attacked, losing between 9,000<sup>30</sup> and 12,000<sup>31</sup> to Cholera and the bulk of the remainder of the army to desertions.

Other troops moving into central India<sup>32</sup> and pilgrims traveling to Pandharpur suffered disease outbreaks but continued on, transmitting the disease as they went. It was in sparsely settled central India that army surgeons first noted a regular and progressive movement of the disease which was "undaunted by the most powerful monsoons and winds"<sup>33</sup>.

In March, 1818 the advance of the disease increased in speed, to the north into Nepal; to the east into Burma; to the west and the Melabar coast, and through the entire reach of the southern peninsula into Madras and Madura, extending over the most of India in all of the principal cities.<sup>34</sup> Only a few of the larger tracts of the country, more especially the hill districts, escaped it. At Pandharpur, the site of the great religious festival, 3,000 reportedly perished<sup>35</sup>. In crowded Bengal a calculated 150,000 died<sup>36</sup>. From northern Nepal to the southern Travincore, uncounted thousands fell victim to the disease. The disease spread to Siam, Burma, Sumatra, Mauritius and Reunion in 1819 and to Java and Borneo in 1820.

The western, though not the eastern movement of the disease, appeared to have ceased by 1820, but epidemic outbreaks continued throughout India and extended rapidly through countries east and south of India.

"Entire villages were depopulated, and the terror was so great that the crews of many vessels deserted and fled in the night."<sup>37</sup>

The manifest fear of the populace was clearly understandable, for there was no explanation for the spread of a disease which acted in an apparently purely arbitrary manner, supposed, originally, to be extant only around wet, swampy areas which exuded a dangerous miasma into the air, but appearing, for example, at the citadel of Jaraguth built on an isolated rock 1,000 feet above a plain while missing entirely the village built at the base of the rock<sup>38</sup>.

Mortality statistics are of interest for though these figures may be distorted, these are the figures relayed to Europe and America:

Bombay (April 1819)	15,945 ascertained death (but affirmed by the Medical Commission to be only 1/4 or 1/3 of the real number) <sup>39</sup> ;
Bankok, Siam	40,000 <sup>39</sup> ;
Mauritius	10,000 to 20,000 <sup>40</sup> ;
Benares	15,000 <sup>41</sup> ;
Calcutta	5,000 <sup>41</sup> .

The disease spread to Siam, Ceylon, Sumatra, and, very startlingly, 3,000 miles distant to Mauritius<sup>42</sup>.

"Seventeen days before this, the Topaz, a frigate of 46 guns, from Ceylon anchored in Port Louis, the principal city, after a very unhealthy voyage, during which several men had died of Cholera Morbus. Port Louis was first attacked and killed 500 of its 8,000 population in ten days."<sup>43</sup>

Transport of the epidemic over long stretches of ocean had not, until this outbreak, been demonstrated. Despite this occurrence, Europe and America paid little heed; most of the scientists of the day hastened to explain the disease of Cholera as due to any number of exotic causes -- not, however, due to the transmission of "germs".

The Siamese, in a more extreme view, attributed the disease to the influence of an evil genius, which, in the form of a fish, had sought refuge in the Gulf of Siam. A great religious festival was held to exorcise this evil being, "but the collection of a great mass of human beings, redoubled the fury of the disease, and 7,000 died shortly after"<sup>44</sup>.

1820 extended the disease to the Philippine Islands where "the horror was so great that it caused an insurrection in which perished many Europeans, and a great number of natives"<sup>45</sup>. China, Indo-China and the Zanzibare coast of Africa also were invaded by the Cholera, while in India, the epidemic showed no signs of abating<sup>45</sup>.

1821 was, for Europe, a historic year, for in this year the disease first demonstrated a disregard for its Asian ~~and~~ boundaries and moved west from Bombay, India, to Muscat<sup>46</sup>, a city on the Gulf of Oman, transmitted, notably, in convoy by 800 English troops sent to punish pirates. It rapidly ascended along caravan and mercantile routes to Qishm and Bender Abouchir<sup>47</sup>; to the island of Barien, and thence to Basorah (Basra) where a supposed 18,000 of a 60,000 population died<sup>48</sup>. At Shiraz an estimated 6,000 of 35,000 died in an eighteen day period<sup>49</sup>. From this focus, Ispahan and Yezd in central Persia were attacked<sup>50</sup>. By vessel and caravan both, it moved to Bagdad, destroying a third of its population<sup>51</sup>, with mixed blessing<sup>51</sup>, withdrew in the face of the Cholera to Tabreez, thus providing a focus for the infection of western Persia<sup>52</sup>.

In this same year, in Asia, the Dutch garrison at Borneo was nearly destroyed, such that the resident was the only person able to administer medicine. At Batavia, 17,000 died, and in Java proper 102,000 were said to have succumbed to the disease<sup>53</sup>.

Bagdad, in 1822, suffered a recurrence of the epidemic and subsequently traders carried it to Mosul, Mardin, and Diyarbakar. From a focus at Ispahan attacked the previous year, Kashan, Kermanshah, Tehran, and Hamadan were invaded<sup>54</sup>. And in the same year, the disease spread to Meshed, a very prominent Mohammedan religious shrine, to which annual pilgrimages were made. In the East, China, Borneo, Java and India still suffered heavily from the epidemic. The following year the Mediterranean cities of Aleppo, Antioch, Tortos, Tripoli and Damascus<sup>55</sup> were attacked, as great groups of pilgrims returned from recently infected Moslem shrines, among them Meshed<sup>56</sup>.

Transmission along trade routes and roads taken by returning pilgrims spread the disease north to Lenkoran and Baku<sup>57</sup>. The Prince Royal of Persia, still in a belligerent mood, attacked the Turkish army in 1822, but just a few days after a victory, lost large numbers to the Cholera, including a computed 2,000 on a single march. He withdrew to Tauris, soon Cholera-swept, and thus served for a second time as a prime factor in the spread of the disease to the capital<sup>58</sup>. In the Caucasus, Tiflis (Tbilisi) at the entry of the sole mountain pass, into Russia, i.e., Dariel,<sup>59</sup> was afflicted and soon Astrakhan, a prominent Russian Caspian seaport, reported the Cholera, carried apparently both overland from Tiflis and by sea from Baku<sup>60</sup>.

In 1823 Europe itself was in turmoil, for certain of these cities along the eastern Mediterranean were direct ports of commerce with western Europe. Medical investigations were instigated and a flurry of treatises erupted throughout western Europe in that year. But soon again, quiet reigned<sup>61</sup>, as the Cholera mysteriously withdrew from its Middle East invasion.

For reasons quite unknown, progressive spread of the Cholera westward, though not eastward, subsided over the next five years, although severe epidemics were reported in separate years throughout China, India, and southeast Asia. Except for a sporadic flare-up in Syria, in 1824, there were no reported epidemics west of India from 1824 to 1828<sup>62</sup>. However, it was evident that in contrast to 1816 when only sporadic outbreaks of the Cholera occurred in India, 1828 disclosed foci for the spread of the epidemic throughout Asia. Precautions in the form of blockades, and

quarantines which had gradually taken form from 1821-1824 were relaxed as Europe and the Middle East collectively heaved a sigh of relief and assumed that there was no more danger. More particularly, Teheran relaxed its vigilance in 1829 after six years of preventive measures taken to prevent the ingress of the disease, and through this fissure in the wall, entered the Cholera once again.

An epidemic beginning again around Juggernaut (Puri) in 1824<sup>63</sup>, spread across India toward Bombay in 1825 but aborted its spread at this point<sup>64</sup>. 1826 found the disease rampant over all lower Bengal, followed by progressive transmission to Benares, far up the Ganges, in May. By November, Delhi and Agra in north central India reported an epidemic<sup>65</sup>. 1827 revealed a general epidemic over much of northwest India, most prominently at Lahore, extending westward to Cabul in eastern Afghanistan<sup>66</sup>.

So severe was the disease around Calcutta that human sacrifice occurred to appease the anger of the God of the Cemeteries in consequence of the previous cessation of this practice<sup>67</sup>; it was reported that animals as well as humans were dying of the disease<sup>68</sup>.

Cabul was again lost to the Cholera in 1827 and, perhaps surprisingly, Herat also, some 400 miles to the west<sup>69</sup>. The propagative spread of the Cholera westward took, in this instance, a seemingly devious, mountainous, poorly traveled route, but a report by a Lieutenant-Colonel of Sir Alexander Burnes brings some interesting data to bear. In abstract: the Lohanee Afghans, a migratory, commercial and pastoral people, proceeded annually into India in three great divisions -- the caravans, comprising

a total of 50,000 camels; they traveled into India at the end of October going as far as Hurdwar where they wintered, returning to Persia via Cabul and Herat, where they spent the summer; the route is the most ancient of caravan routes, being the same taken by Alexander the Great, Genghis Khan, and the various Mohammedan conquerers of India<sup>70</sup>.

Thus, carried by these Afghan merchants and others traveling with them to Herat, transmission further was markedly implemented by pilgrims traveling to and from Meshed, the so-called "Holy City of Persia", 200 miles west. A quoted report by Sir James Connolly states that for eight months of the year all the roads to and from Meshed were thronged with pilgrims from India, Cabul, Afghanistan, Turkey, the Caucasus and the shores of the Black and Caspian Seas<sup>71</sup>. Knowing this, it is no surprise to find in 1829, Meshed, and subsequently Teheran, once more with the disease.

Consideration of the geography involved readily discloses that a westerly spread of Cholera from India was possible via two principal routes only. By sea, as it came in 1821, and by the Kyber pass route as it arrived in 1829, the Kyber pass route being the only one taken overland into India by groups of any size, and the sea route being the one of shortest distance bypassing the mountain range (transported, as we have seen, by a large body of English troops). Once the major barrier of the mountain ranges bordering India on the west was overcome, the spread of Cholera throughout the Middle East in 1821-1823 and 1829-1830 was actually quite similar.

However, it was not from Persia but via the great overland trade routes to the east that Russia was first invaded. From Herat, the disease took two directions, one west to Teheran, the other north to Balk and Bokhara into what is now southern Russia<sup>72</sup>. Pilgrimages to Bokhara, another of the holy cities, abetted a natural flow of traders along a fairly well-traveled caravan route and in 1829 the disease was well established at both these points. From here, north, the course is less defined. However, it is recorded that the Khan of Khiva, ruler of what is now roughly the Soviet Socialist Republic of Uzbek, embarked on a campaign south toward Persia but was compelled to retreat because of a Cholera outbreak in his camp which "swept away a large portion of his army"<sup>73</sup>. The city of Khiva, south of the Sea of Aral, was soon subject to the Cholera and sometime later, Aralek, bordering on the north of the Sea of Aral, similarly. On August 26, 1829, Orenburg (now, Chkalo) had its first case of Cholera<sup>74</sup>, the diagnosis of which was not established until massive outbreaks some two weeks later<sup>75</sup>; for some time it remained a mystery as to how it had entered, for though frequent caravans entered this city, Khurgis tribesmen who constituted the primary body of the caravan were apparently immune to the disease<sup>76</sup>. The first cases were among the military, of whom there were 16,000 stationed in this easterly military post, but who, quite significantly, were doing outpost duty toward the heavily infected area of Khiva<sup>77</sup>.

From Orenburg in late 1829, the Cholera, after many months of limited local spread, marched rapidly westward toward Novgorod, the



site of a great mid-summer fair where 300,000 to 400,000 merchants annually assembled; all of central Russia soon became afflicted<sup>78</sup>.

The rapid spread through Russia is readily explained when it is understood that in the Russian settlements everything was thrown out around the dwellings; owing to the intense cold and the great expense of transporting drinking water, the Russians were in the habit of drinking the water of the melted snow, frequently the same snow on which the Cholera stools had been thrown.<sup>79</sup>

Meanwhile, from Teheran, the Cholera again spread to Tbilis (Tiflis) and, repeating its trip of seven years previous, entered Russia, particularly Astrachan<sup>80</sup> through the pass of Dariel and via boat from the infected Baku. Essentially Russia was caught in a kind of pincers movement, as from Astrachan, southern Russia fell prey to the disease<sup>81</sup> which moved relentlessly and characteristically along merchant routes: rivers, caravan routes and roads<sup>82</sup>.

Moscow made a determined effort to save itself by both quarantines and military cordons. The Emperor of Russia, with medical advice, proclaimed the disease to be spread by persons and soiled clothing only, and with this assumption divided the city into twenty wards, each with its own hospital, and provided barricades between each ward to isolate the disease were it to enter<sup>83</sup>.

A double military cordon was stationed about the city with troops and loaded cannon. All bridges were destroyed, and approaching wagons, horses and vehicles seized<sup>84</sup>. The cordon was stationed many miles

distant from the city with orders to prevent any person from passing. When the disease was found to have penetrated the cordon, the troops withdrew and established new defense lines<sup>85</sup>.

Infected persons were isolated; their clothing washed in chlorine water or vinegar, and fumigated with burning sulphur. Physicians rinsed their hands and faces with vinegar and rinsed their mouths with it; they were careful not to swallow their saliva, and breathed through sponges soaked in vinegar. Throughout the latter part of August, the disease raged in the cities surrounding Moscow on all sides but its ingress into Moscow was not to be denied by military cordon or quarantine, and early in September cases broke out in all quarters of the city, almost as though by spontaneous combustion. 50,000 fled the city and a reported 9,000 cases occurred<sup>86</sup>.

From Moscow in 1830, the disease moved slowly, relentlessly toward St. Petersburg (Leningrad) and north toward Archangel<sup>87</sup>. St. Petersburg, the imperial city of the Czars, was defended even more heavily than Moscow, having a triple cordon of troops stationed about it and a year's supply of provisions laid in<sup>89</sup>, but likewise to no avail. St. Petersburg, with no sewers, and only surface wells as a source for water, suffered heavily. The people, sixty years before Koch's discoveries, placed the blame on the wells, but, however, accused the government, doctors, apothecaries and Jews of poisoning them<sup>90</sup>. Extensive rioting occurred in which many doctors were killed. On one occasion the inhabitants seized two government physicians and, tying them face to face with defunct victims of the Cholera, threw them into the common burial pits<sup>91</sup>. Finally, a reported 10,000 broke the protective cordon and

spread themselves over the country carrying the disease with them<sup>92</sup>.

Poland, a Russian province, unfortunately chose 1830 as a year of insurrection, and, from the infected Russian provinces, large bodies of troops were sent to put down the rebellion. The Poles, defeating the Russians on several untimely occasions, overran their infected camp-grounds, contracted the disease, and were beaten back to Warsaw, thus introducing the disease into diverse parts of Poland<sup>93</sup>. Virtually the whole of both the Prussian and Austrian armies were deployed along the Polish and Russian borders to prevent Cholera's ingress but, in a rare moment of genius, the Prussians chose to allow the Russians to land supplies at Danzig for transport into Poland. Danzig, needless to say, was soon overrun choleric diarrhea. The coup-de-tat to the whole fiasco came when infected Polish armies were permitted to cross Prussian and Austrian borders in order to avert the disaster of surrendering to the feared Russians<sup>94</sup>.

Riga contracted the disease in May, 1831<sup>95</sup>, presumably by transport down the Duma River, whose headwaters lay near to the infected Moscow. Sixty vessels fled the city, four presumed destined for Sunderland, England, the focus of the outbreak in England<sup>96</sup>, though it is doubtful that these were instrumental in infecting the English for the first English cases were not reported until October, 1831.

In August, the disease appeared in Berlin<sup>97</sup>, causing in three months' time a recorded 1407 deaths. Vienna, greatly frightened by the epidemics in neighboring Poland and Hungary, surrounded their entire city with a double cordon but did not prevent the encroachment of the disease, which

struck and killed 1936<sup>98</sup>. In Vienna it is noted to have killed many in the upper classes, an item which evoked still greater terror among the neighboring peoples<sup>99</sup>.

Two months later, Hamburg (population 100,000) was hit, with 455 deaths, and within two weeks, over the very active lines of sea commerce, the disease was carried to Sunderland, England, and spread through much of Scotland by December of that year<sup>100</sup>.

The year 1832 marked the progress of Cholera through south England to London. One historian observed, "it reached London, the largest city ever visited by pestilence; but very unexpectedly its ravages in this modern Babylon were very inconsiderable"<sup>101</sup>. In March, Paris, Dublin and neighboring cities were infected. In a six-week period in Paris, 20,000 died. In England and Scotland, by July 4, 1832, 14,919 cases were reported with deaths amounting to 5,541<sup>102</sup>.

The feverishly superstitious Irish peasantry sought protection by rubbing sod of their own houses on a sod of holy fire and then inoculating the turf of seven neighbors whose homes had not previously been inoculated. The delusion was spread over the countryside and as the number of inoculated houses grew, it became necessary for the people to travel considerable distances. The military was finally summoned to quiet the people as the orgy sent thousands scurrying as far as thirty miles over the countryside seeking untouched houses<sup>103</sup>.

Paris was one of those locations with the highest morbidity and mortality. Within eighteen days following invasion supposedly 7,000 died. Turmoil of almost rebellious proportions prevailed. A report from the Messenger des Chambers of April 15 states:

"The day drags on, people run to and fro...The city towards ten or eleven is quite deserted, except in the very centre where the agitated crowds continually assemble in great numbers.....It is impossible any longer to doubt that there is an organized band in Paris who poison the wine, the milk and the water throughout the city. The citizens... cry loudly against so infernal a conspiracy."<sup>104</sup>

Grisquet, Prefect of Police, worked to suppress the pestilence by forbidding garbage, dirt and rubbish being thrown in the streets as usual, but the rag-pickers rebelled, raised barricades and fired on the troops<sup>105</sup>. Various groups blamed the government for propagating the disease, others the physicians and apothecaries, both of whom were frequently assaulted. Stories assumed apocryphal and moralistic proportions; one report records the deaths of 1200 prostitutes of a group of 1300 "of these miserable creatures" living on the Rue de la Mortellerie<sup>106</sup>.

The most remarkable epidemiological study was done by Dr. Marey, who published years later, in 1884, the brochure "Les Eaux Contaminees et la Cholera". He noted on a Paris map the location of every house where Cholera deaths had occurred and noted that the left bank of the Seine had relatively few deaths compared to the heavily infected right bank, the latter of which was supplied with its water via the Canal de L'Ourcq, a heavily commenced canal fed by the trash of the market boats and numerous sewers<sup>107</sup>. Koch's work was anticipated in part but few paid particular interest to water supply problems, preferring to work over age, sex, inebriety, rainfall, thermometer and barometer statistics.

An almost forgotten facet of spread in 1831 was from the Mohammedan holy city of Mecca<sup>108</sup>, supposedly infected by sea from India in that same year. Tens of thousands of pilgrims visited the shrine yearly and in 1831,

"nearly half" died of the Cholera, including the governors of both Mecca and its neighboring seaport, Jeddo. Returning pilgrims spread it throughout the Middle East, to Suez and Cairo, the port city of Alexandria, throughout the countries of Persia (Iran), Syria, Saudi-Arabia<sup>109</sup>, and into Turkey<sup>110</sup>. Constantinople (Istanbul) and Smyrna in Turkey both had high morbidity rates; the method of disease spread to these cities remains a bit vague, perhaps via overland routes with the pilgrims, perhaps via ship from Alexandria<sup>111</sup>. However, the spread, it is probable that southern Europe was infected at about the same time both from an invasion from Russia and from Turkey.

Emigration from the widely, though not heavily infected England, Ireland and Scotland was at a peak in 1832 as thousands sought to flee the epidemic by moving to the New World. From Limerick, Ireland, the ship *Constantia* arrived at Grosse Island, the quarantine station for Quebec, on April 28, 1832, with 170 emigrants, 29 of whom died en route of Cholera. On May 28, the *Elizabeth* from Dublin came in with 200 passengers and twenty reported deaths. June 3, the *Carrick* from Dublin followed with 145 emigrants and 42 deaths. Quarantine was a farce, however, for only those who were ill were retained, and all others discharged to go to Quebec or upriver to Montreal<sup>112</sup>. Significantly, in the first two weeks of June, the time of the outbreak at Quebec, 56 cases occurred in Quebec alone, and so from this beginning the disease moved westward along the St. Lawrence and through the Great Lakes.

It is from this point in the epidemic spread of Cholera that I shall subsequently discuss the progressive transmission toward Rochester

in 1832. Since it is the particular reaction of this city to the disease, I shall rather summarily conclude the dissertation on the epidemic spread subsequent to this period for it had little bearing on Rochester's own responses and preparations.

New York City had its first cases on June 25, the transmission of the disease to this site having remained a great mystery. Edmund Wendt, in his history, presumes that infected ships from the British Isles landed at New York at about the time they landed at Quebec, a reasonable supposition, but that health authorities treated the sick secretly at the Staten Island quarantine station while sending the well or apparently well to the city or up the North River, thus concealing the true entry of the disease<sup>113</sup>, a purely deductive guess.

Whatever its origin, the seaport cities of Newport, Boston, Newark, Philadelphia, Baltimore, Washington, Charleston and lesser ports all along the coast were infected by the end of August, supposedly from the New York focus<sup>114</sup>.

Across the Great Lakes, the disease traveled to Buffalo and Detroit, to Chicago, Madison, Louisville and St. Louis in October<sup>115</sup>, and to New Orleans, Mexico and Cuba by 1833<sup>116</sup>.

To conclude the story of the epidemic as it prevailed in Europe: the troop transport, London, left England on Christmas Day, 1832, for Spain, carrying with it cases of the disease, and soon Cholera swept over Spain from Madrid to Barcelona<sup>117</sup>.

From Paris, it was transported via trade routes to Marseilles and Toulon, east to Nice and Cannes. In 1834, Venice and Trieste recorded epidemics; and in 1836 it appeared in Rome, Naples, Milan and surrounding areas and slowly progressed south through Italy and Palermo. There, after killing 3893 at Palermo and 578 of 3070 in the English garrison, it was transmitted to Malta where, within a few months, the epidemic drew its final breath, twenty years after its generally endorsed commencement date of 1817<sup>118</sup>.

This epidemic in its morbidity and mortality ranks with the most dire of the epidemics recorded. The number who actually died can never be fathomed, but the number is very likely in the millions. Illustrations of the fear and terror engendered as it invaded the various cities are frightening. Much of this, of course, was known to the Rochesterian of the era, albeit some weeks or months after the occurrence. However, with this in mind, it will be considerably easier to understand the city's reactions as a disease, certainly more feared than an invading army, moved relentlessly and steadily across a primitive, recently Indian-infested countryside toward the small, young village of Rochester.



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S E C T I O N   I V

P O R T R A I T

V I L L A G E   O F   R O C H E S T E R

1 8 3 2

A tour of Rochester in 1832 would have been surprisingly extensive, particularly to those who remembered that just twenty years previously there was scarcely a house on the land. It now comprised a town of 12,800 population, with 1300 houses and nine churches,<sup>1</sup> plus "a courthouse, a gaol, two banks, two markets, sawmills, cotton and woolen factories, the Franklin Institute, and the Athenaeum, besides a crowd of well-furnished shops or stores, and about a dozen flour mills".<sup>2</sup> Letters and travel journals of the day give us a fairly well-documented view of the physical appearance of the town. Edward Thomas Coke related his impressions on a visit in 1832:

"At sunset, descending a hill, we entered upon a flat, marshy plain, on which the town of Rochester is situated. It has more the appearance of a town in a new world than any I visited, and nothing can be more miserable than its appearance from a distance. An open space has been merely burnt in the forest, and the town has been run up without any attempt at getting rid of the innumerable stumps of trees...It is, in truth, a city in the wilderness, and cannot be healthy, so long as it is surrounded by such dense, dark forests...though it is the most thriving town in the State.....Many of the streets are well-laid out, and contain excellent buildings; the arcade, (Reynolds' Arcade) ... is but a second rate structure, ... making a poor figure for so flourishing a town. The churches are superior in style...and constructed of more durable materials, than is generally the case in America.

"The Cholera being very prevalent in the town, we departed ...westward on...the 13th of August."<sup>3</sup>

Both Coke and Thomas Hamilton remarked upon the contrast between the more settled countryside and small villages, e.g., Canandaigua, and the milltown on the Genesee. Hamilton further noted an early eyesore:

"...see the falls of the Genesee. The height of the uppermost is considerable...and the water rushes over it grace-.."

"...fully enough, but the vicinity of sundry sawmills and corn mills has destroyed the romantic interest...

"Rochester is a place worth seeing...Such growth is more like forcing in a hot-bed, than the natural progress of human vegetation...The (Erie) canal runs through the center of the town, and crosses the Genesee by an aqueduct...There are several streets in Rochester which might be backed at reasonable odds against any in Hull or Newcastle...The appearance of the shops indicated the prevalence of a respectable opulence..."<sup>4</sup>

English travelers were disturbed by the wooden buildings;

Reverend Stephen Davis noted:

"...uniformity in the appearance of the erections is not to be expected; and a wooden town, (as it is principally), however beautifully painted, is not exactly like one of stone or brick; ...becoming more improved every day..."<sup>5</sup>

Another Britisher marveled at the "progress from stumps to steeples";<sup>6</sup> but the stumps were not all in the streets, claimed

Mrs. Trollope:

"Rochester is one of the most famous of the cities built on the Jack and Bean-stalk principle...I was told...that the stumps of the forest are still to be found firmly rooted in the cellars..."<sup>7</sup>

Henry O'Reilly added a wry observation:

"The main streets, cut up by thousands of wagons...presents during most of the year a spectacle which causes the place to be jocularly called 'City of Mud'..."<sup>8</sup>

Contemporary writings reflect some inconsequential debate as to the reason for Rochester's remarkable growth. Some attributed it to the Genesee River and its water power, others to the Erie Canal and its water traffic. At any rate, the expansion resulted in a busy manufacturing town, in which milling of corn, wheat and wood predominated. No small income was made in the grocery business, for Rochester

was one of the last stops for provisions for westward migrants. By 1832 there were two banks, a dozen lawyers and upwards of 25 doctors, and, owing to the canal, a goodly number of transient laborers.

The day by day progress of commercial endeavor reflected and excitement and youthfulness which could not be stifled by the overlay of a growing urban consciousness. A kind of rough, natural charm was indicated in an article in the Gem of June 26, 1830, here recorded by McKelvey:

"An excellent view of the bustling town was preserved by an observant citizen...who stationed himself in the observatory over the Arcade at daybreak one June morning in the early thirties. The 'venders of eatables' and the 'milkman's cart' first appeared quickly followed by 'an heterogeneous mass of men, all wending their way to market'. Soon the mechanics and the merchants walked briskly to work. 'About seven, the various buildings sent forth their representatives to breakfast. Then could be seen the yet slumbering clerks reclining upon the boxes outside the doors, or stretched at full length on the counters during the absence of their employers.' About ten arrived the creaking farm wagons, loaded with 'wheat, corn, oats, apples, potatoes, butter, cheese and everything that we poor cits could not live without'. Amidst the hubbub of 'bartering and bargaining, buying and selling' appeared several ladies bedecked with 'formidable head pieces and popish sleeves', for it was the fashionable hour for a promenade. 'The clink of the hammer was suspended for a time...when the bell rang for twelve' bringing out the 'mechanics en masse, preparing for dinner'. About one, 'the merchants and gentlemen of the profession were seen with a hurried step' heading for home, whence they returned an hour later 'with each his cigar half smoked and commenced the business of the afternoon with all the zeal imaginable'. A few beggars disguised with sugar-loaf hats, frizzled hair, tights, eau de Cologne, and black gloves', strolled to dine in accordance with the 'European taste'. The hours from three to five were filled with 'noise and confusion, bustle and business. Ladies, dandies, gentlemen, children, dogs, horses, carts, wagons, trucks, stages...kept alive the streets.'..."

"At five the farmers began to leave and the school children came bounding along the streets. At six everybody hastened to supper -- except those who were impatiently waiting for the postman to sort the mail. The author of 'A Day in the Observatory' eagerly joined the latter group."<sup>9</sup>

Housebuilding had begun to keep pace with population growth.

Although some of the more fortunate boasted Franklin stoves in 1832, the average workingman was getting along with four rooms and a drafty fireplace. The prominent Mr. Schermerhorn discussed with his wife, via letter, his dilemma over the purchase of a fine eight-room house, advising her that she need not bring a piano from the East, since one could be rented in Rochester<sup>10</sup>.

Of course, the "necessary" was part of every estate. The water was supplied chiefly through private wells. The town officials had early adopted responsibility for cleaning both. There was plenty of garden space. In addition, "The town averaged slightly more than one cow and two pigs to each household"<sup>11</sup>.

The problems of transient population and a lack of finances made it virtually impossible to maintain an adequate public school system. There were several private schools, largely church sponsored:

"The Rochester Institute, in line with a reform popular at the time (i.e., education of poor boys) functioned for nearly two years with success until a sudden drop in the price of barrels, which the boys turned out. . .deprived the school of its major income, bringing the experiment to an untimely end."<sup>12</sup>

Adult education was carried on in the Franklin Institute and the Rochester Athenaeum<sup>13,14</sup>. Members met in a hall in the Reynolds Arcade; through dues payments and state support, a sizeable library



was built up. The progressive nature of Rochester's public education was making itself felt in 1832.

Strong religious elements in the village found easy access to the public through the newspapers, which numbered six. There was a large Presbyterian following, and in addition, enough other devout churchmen to provide fertile ground for revivalists such as Charles G. Finney. "Causes" were popular; most situations, e.g., the Cholera epidemic, were interpreted to provide moral lessons. This process became rather tedious, and in March, 1832, Obediah Dogberry, editor of the new Liberal Advocate, cried for "temperance in all things, including opinions", which he found sadly lacking in the "gospel hardened" village<sup>15</sup>.

Among other things, the churches frowned on leisure time. It seems that the task of maintaining the family consumed the energies and interests of the adults; there was little call for organized recreation. The working day was long (not until 1833 did the carpenters begin agitating to have their day cut down to ten hours<sup>16</sup>). Such events as the opening of the canal in the spring offered diversion:

"We were present when the water was let into the Canal. . . . hundreds had been waiting for the event. There were in scores, boatmen with their painted hats and everlasting coats, marching to and fro, making comments upon the canal, etc. There were, also, the impudent drivers with hats turned up before, and whips 'tip'ed with plenty of silk'. . . . There were groups of second hand captains . . . that seemed all interested in the filling up of 'the big ditch'. We could see that many a rusty bugle had been brightened up for the . . . coming season . . . The dealers in 'small wares', that line the canal in the summer season were all in motion, brightening up their cook-rooms, and 'buying up a stock'. Among this class, a variety of kegs and bottles made glad the hearts of the wanton and inveterate."<sup>17</sup>

Theater entertainment was so disdained that Rochester was not even a road step at this time; the animal circus passed the moral code and carried on year round. Welcome were the less sophisticated jaunts and excursions. The holiday crowds traveled by horse car to nearby Carthage (on a unique one track railroad) and by carriage to Monroe and Avon Springs. Lake boats enjoyed great popularity. Amy H. Coughton has drawn on the social lives of other communities to sketch that in Rochester.

"Judging Rochester by other communities one may assume, in lack of detailed record, that the early festivities for the ladies took the form of tea parties. . .bees. . . Church socials, singing societies, informal square dances. . . served to bring the men and women of the community together, while for the men alone, there were the practice nights of the band, the meetings and drills of the flock of military companies and fire companies which sprang up, and those public dinners at the Mansion House, the Eagle Hotel and Rochester House where fourth of July celebrations and other patriotic occasions became an opportunity for lengthy ten course dinners washed down with innumerable toasts. . ."18

Organizations such as the Rochester Female Charitable Society, which had been founded in early Rochester, provided an outlet for those women who liked their "social life with a large mixture of humanitarian work"19.

A fortunate few ventured south as far as Florida on vacation trips. Here we see the line rather distinctly drawn between social classes, as was inevitable following the recent prosperity of the twenties. In 1832 the social phase of life in Rochester was shifting from the "pioneer era" into the "Third Ward era".

The community which anticipated the coming of the Cholera was a boom town, her village government fraught with the difficulties of organization and enforcement engendered by rapid growth. Further, she was a regular stopover on the westward trek, and consequently had an extremely high percentage of her population was transient. Housing was barely adequate; the citizens were plagued by illiteracy, moralistic fires and foul odors. In 1817, at the outbreak of the epidemic in India, there was a scant 600 population; in the time that it took for this identical epidemic to reach the Genesee, Rochester had multiplied her citizens and her susceptibility by twenty.

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S E C T I O N   V

R O C H E S T E R

vs.

T H E   C H O L E R A

The year 1832 found the United States, with no imminent wars of consequence, enjoying the growing pains of adolescence. The country, under Jackson and Calhoun, was an enormous boom town, expanding rapidly in population, territory, and wealth. Problems were many, but almost strictly national. The Indians in Illinois plagued the western migrants constantly and had gone so far, by one rumor, as to have massacred the entire city of Chicago<sup>1</sup>. The North and the South were embroiled in a bitter tariff controversy and restive South Carolinians threatened to nullify acts of Congress. With an eye to the national debt, one group petitioned Congress to rescind postage on all letters as soon as it was paid. And newspapers featured such miscellaneous trivia as the report of a sea serpent seen off the capes of Virginia<sup>2</sup>, and stories of the famed Siamese twin brothers "appearing in person"<sup>3</sup>. But far across the ocean, there was an epidemic.

Since 1830 the epidemic had been creating havoc as it relentlessly moved west through Europe, but from the New World's vantage point, it was merely interesting, worthy of a few lines of news five weeks old and an occasional graphic article by an often sensationalistic globe-trotter -- certainly no more. The ocean was broad, and the supposed Cholera-carrying winds, as everyone knew, blew from west to east across the protective ocean.

A security and feeling of separation from the Old World prevailed, best exemplified in a speech to the Senate by Senator Tayewell:

"The Cholera has not yet appeared within our territory, and there is strong reason to believe that it will not appear unless brought here by emigrants from Europe. It is a pestilence which belongs to the mode of life to which the poorer classes of people in the old world are habitated, and it could not prevail here till our population is reduced to the same condition of wretchedness and poverty."<sup>4</sup>

Few ties existed between those in the New World and Eastern Europe, for Old World roots for both Americans and Canadians lay primarily in Western Europe.

In late 1831, the epidemic moved rapidly across Germany to England, and assumed a different aspect. The "Old World" had succumbed to the Cholera, and this was definitely more newsworthy. Reports became more plentiful and the terror of the epidemic more real. The Liberal Advocate printed this quotation from the London Quarterly Review:

"We have witnessed in our days the birth of a new pestilence, which in the short space of 14 years has desolated the fairest portion of our globe, and swept off at least 50 million of our race. It has mastered every variety of climate, surmounted every natural barrier, and conquered every people. It has not blasted life and then passed away; the Cholera, like the smallpox, or plague, takes root in the soil which it once possessed..... the approach of such a pestilence has struck deepest terror into every community."<sup>5</sup>

With the Cholera spreading rapidly over the British Isles, the New York Board of Health anxiously petitioned Congress in March 1832 to appoint a Commission of Inquiry. The petition was, however, declined disinterestedly, but on the grounds that all the important European powers had appointed commissions, and nothing more was to be gained with an American Board of Inquiry<sup>6</sup>.

Canada experienced greater alarm. In April the Governor of Lower Canada issued a proclamation for a "fast with prayer to avert the scourge of sickness which now threatens the country"<sup>7</sup>. The basis for Canada's alarm was founded on the knowledge that the route of English emigrants was chiefly through Quebec and Montreal to the U.S.<sup>8</sup>, and what with the Cholera sweeping the English countryside, the number of emigrants in 1832 had increased enormously. The Newcastle Chronicle (England) states, "Emigration from all parts of the United Kingdom appears to be going on at a fearful rate."<sup>9</sup> "We believe more people have quitted Elginshire for America, this spring, than during the last ten years."<sup>10</sup> A Montreal paper of late May notes, "Our port and river are alive with ships, sailors, and emigrants. We should not be surprised if at least 100,000 immigrants arrive this year."<sup>11</sup>

Uncertain about the disease and not trusting the widely-accepted theory of atmospheric propagation of Cholera, quarantine of sorts was established at Quebec and Montreal sometime in April for all incoming ships<sup>12</sup>. As previously noted, the quarantine consisted only of detention of those passengers who were ill, with release of all others to debark as they chose. Though one report contends that the first cases arrived from Limerick, Ireland, aboard the *Constantia* on April 28<sup>13</sup>, a May 13 report from the Montreal Board of Health states that 20 ships had arrived at the Quebec and Montreal quarantine grounds without cases of Cholera on board<sup>14</sup>.



Despite the loose quarantine arrangement, it was, to some degree, effectual, for it was to be observed that certain ships on which Cholera broke out turned back rather than proceed to Canada, ostensibly because of the quarantine<sup>15</sup>.

Though both the Constantia and the Elizabeth (from Dublin, May 28) reputedly in later reports had carried the Cholera to Quebec<sup>16</sup>, the Quebec Board of Health chose to stigmatize as the disease carrier the Carricks which arrived from Dublin on June 3 with 145 emigrants and 42 deaths<sup>17</sup>.

On Saturday, June 16, a letter dated June 11 arrived by boat from Montreal in the village of Rochester just in time to be printed in the evening Rochester Daily Advertiser, without time, apparently, for embellishment or editorial comment:

"No doubt now remains that the Indian Spasmodic Cholera is raging in the city of Quebec. Fifteen cases and seven deaths had occurred when the mail left. Our Board of Health are this moment assembling."<sup>18</sup>

On Monday, a more dramatic pronouncement was made with appropriate accompanying headlines:

"Seldom have we communicated news of deeper interest than is embodied in this.....paper. The pestilence so fatal to life in Asia and Europe is now on our shores, and may ere long be desolating our homes. Its progress through Quebec and Montreal forbids the supposition that we shall be long exempt. The Rubicon is passed -- the barrier interposed by the Atlantic is destroyed -- and can it be believed that the MYSTERIOUS SCOURGE which has swept like the Siroc over two continents and traversed an ocean, can be stayed in its desolating career till measurably glutted in the New World?

"It is proper that the people should be early put upon their guard -- that the sanitary precautions which reason dictates may be early and efficiently taken. Temperance in all things, cleanliness, exercise, and last but not least, cheerfulness, are among the precautions which all should use."<sup>19,20</sup>

As if to further stimulate the citizenry, the following articles were also published<sup>21</sup> :

From the Quebec Gazette of June 11: "On board the Steam Boat on which our informant started for Montreal, one death occurred before she left the wharf; four persons were attacked soon after she got underway; one person died and was thrown overboard .....";

From Montreal, June 13: "The cases are numerous and deaths are almost as numerous as cases. At least fifty cases had occurred at Montreal nearly all of which were fatal.";

From Albany, June 15: "Emigrants in great numbers, who landed at Quebec from infected ships, are among us! Passengers who were surrounded with its dying and dead victims...passed through the City this morning."

The initial pronouncement was enough motivation, however.

Sunday evening the elders of the village called a "hasty" meeting which "thronged" the Courthouse "to consider the critical condition of the public health". Prefatory remarks established the meeting's urgency:

"The great intercourse of Rochester with Canada, etc. with the strange character of the pestilence, forbids the hope that we should be long freed from the scourge unless the most vigorous policy is instituted and maintained", and it was suggested that "instantaneous measures (be adopted) for removing all nuisances, cleansing streets, purifying alleys, sinks, etc."

General Gould, U.S. internal revenue collector, added that two vessels had just returned to Rochester from Canadian ports, who, seeing the inhabitants flying in all directions, returned without freight. And it was noted that a steamboat had taken off about 1000 passengers from near Prescott to be landed along the lake shore.

General Mathews emphasized, "that, if the Corporation had not adequate authority, this was one of those extraordinary cases wherein the people should promptly take power in their own hands". He then presented a petition to be submitted to the legislature which would increase the authority of the Corporation in such cases and which authorized the imposition of a tax on the village to meet the expenses which might be incurred in preparing a hospital<sup>21</sup>.

Quite evidently, the tenor of the meeting was anything but complacency. Before they adjourned, they appointed a committee of eight "for the purpose of drawing up certain resolutions".

General Mathews' suggestion that this was an "extraordinary case" wherein the people could take power into their own hands, was acted on only too soon. On Wednesday morning the Board recommended that a "Committee of Inspection" examine what measures might be adopted to remove the nuisance in the building and yards called Love's Buildings at the corner of Buffalo and Sophia Streets". The Daily Advertiser adds, "This afternoon the block of buildings known as Love's block was partially destroyed by fire". At 5:00 the hastily assembled Board of Health passed a resolution: "Resolved that this Board will use all legal and proper measure to prevent the introduction of Asiatic Cholera in this village, but wholly disclaim all violent or illegal measure."<sup>22</sup> Who was responsible for this act of arson was never indicated. Most clearly it indicates that the villagers regarded the approach of the Cholera with anything but passive equanimity.

The appointed committee of eight promptly returned the following resolutions (in abstract):

- 1) That a Board of Health consisting of 16 persons be appointed.
- 2) That the Board be authorized to employ assistance.
- 3) That the necessary expenses be defrayed by village tax.
- 4) That the following specific measures be included:
  - a) Effectual cleansing
  - b) A rigid quarantine on all the avenues to the village
  - c) The publication and circulation of health regulations, the proper measures to be pursued and the medicines to be provided in cases of sudden attacks, before medical advice can be procured.
  - d) The official reporting of the Board from time to time.<sup>23</sup>

Rochester's first permanent Board of Health<sup>24,25</sup>, was duly appointed with Dr. Mathew Brown, Jr., President.

The eminent Dr. Brown, a former New Englander and resident since 1812<sup>26</sup>, was one of the town's leading citizens, having been president of the village trustees for six years (1820-1823)<sup>27</sup> and an active practicing physician and member of the Monroe County Medical Society<sup>28</sup>. Of the remaining members, probably only Levi Ward, Jr. had a medical background, while the others were village businessmen.

The proper health regulations and "medicines to be provided" for the Cholera were initially drawn from a report issued by the Edinburgh Board<sup>31</sup>. Since this was apparently the foundation for the city's approach to the Cholera, the report is quoted in a condensed, but still extensive form:

- "1. The Board are satisfied that the disease may arise spontaneously from hidden causes, and that it may also become contagious in circumstances not yet ascertained....but....when it does become contagious, the risk of spreading in that manner is very much diminished if due attention is paid to cleanliness and sobriety.

- "2. ...the most essential precaution for escaping the disease is sobriety. In like manner...personal cleanliness--ventilation of dwelling houses--warm clothing--regularity of sleep--keeping..within doors at night--taking food before going out in the morning.
- "3. ..Several hospitals should be opened over the city;"
- "4. ..To prevent the possibility of delay, especially in the dead of night, when the disease is very apt to begin, the Board recommended families to provide the following:
- a. Mixtures Sulfuric ether and aromatic spirit of hartshorn, of each 1/2 ounce, compound tincture of cinnamon, one ounce. Mix and cork up carefully.
  - b. Laudanum an ounce in readiness.
  - c. Pills Opium 24 grains; camphor one drachm, spirit of wine and conserve of roses enough to make a mass of proper consistency; divide into 24 pills.
  - d. Clysters Laudanum one ounce; tincture of assafoetida two ounces; before using, mix three teaspoonfuls with a wine glassful of this starch.
  - e. Mustard Mustard to be applied to porridge poultices.
  - f. Hot Air Bath a hot air bath of simple construction made by any carpenter.
- "5. Send directly for medical aid.

"Give a teaspoonful of Mixture No. 1 with 60 drops of laudanum in half a wine glassful of cold water. Follow with a tablespoonful of warm spirits and water or strongly spiced wine. Repeat two teaspoonfuls with 30 drops of laudanum in 1/2 hour if first dose fails to relieve. If the mixture be vomited, give two pills, No. 3, and repeat in 1/2 hour if the first two fail to relieve or be vomited. The clysters, No. 4, should be resorted to also from the first, and repeated once if not retained. Hot air bath or dry heat over the whole body should be resorted to from the first. The mustard poultices should, as soon as possible, be applied over the belly and on the soles and calves.

"By the time these measures have been put in force, opportunity will have been given for securing medical advice. Blood letting, when resorted to within the first, second or third hour from the commencement of the attack, has been generally found useful."<sup>31</sup>

As may be readily seen, heavy reliance was placed on opium (both in the pills and as laudanum), which, as we know, acts both to relieve the pain attendant with the Cholera, and to reduce to some degree the marked hypermotility attending the Cholera infection. The mustard poultices had some rationale in serving as a ~~courier~~<sup>counter</sup> irritant to the distressing intestinal pains and the muscle spasms in the extremities. The use of heat applied to the exterior of the body was done, theoretically, to reestablish body homeostasis, to warm the skin and extremities which were, of course, cold from a compensating vasoconstriction, often from shock. It is dubious if this last piece of therapy did much for the patient while the various remaining herbs, wines, etc., served little more than as a vehicle. The blood letting was, of course, the province of the doctor and only incidentally referred to, though in prominent use as a therapeutic measure throughout the world. There were a few who recognized it to be deleterious to the patient<sup>32</sup>, but they were in the minority and in conflict with all the best medical practitioners and teachers. On the whole, with the exception of the blood letting, the therapy as we see it today was essentially supportive, providing symptomatic relief but probably having little effect upon the disease. If the factor of blood letting be added, it is quite safe to say that the patient, in the long run, was better off without the doctors.

In the succeeding preparation, the Board of Health on the 19th drew up the following provisions:

- "1. That a quantity of lime be procured and deposited in each ward for the gratuitous use of the citizens.
2. That a Committee of Inspection, two from each ward, be appointed for the purpose of ascertaining, discovering, and removing nuisances.
3. That a committee be appointed to make an abstract of the ordinances on the subject of nuisances."
4. That a committee be appointed to institute quarantine regulations.
5. That a committee be appointed to consider the propriety of establishing hospitals.
6. That a Board of Physicians be appointed to report to the Board of Health daily re: the health of the city."<sup>33</sup>

The ordinances related to nuisances were presented and evidently thought to be quite incomplete, for within the week the Board had assembled a fairly extensive list to be appended. The original list was felt to be still applicable as it stood except the last cited ordinance which forbade the villagers from allowing their pigs to run at large in the streets. This, for reasons peculiar to the day and the pigs, they rescinded.

Abstract of Nuisances, May 13, 1826:

- "1. The owner or occupant of any lot or building remove any chips, stones, barrels, and other casks, lumber, wood, straw, manure, or rubbish of any kind, from the sidewalks, or from the street...opposite such lot or dwelling, to the center of the street...a fine of ten dollars is imposed for neglect.
2. ...penalty of one dollar on every occupant of any building who shall neglect to clear off and sweep the sidewalk opposite such building, every Saturday during the summer season.
3. ...penalty of two dollars on every person who shall throw..onto any...street, any suds, slops or filthy water or any urine, or...permit the same to pass through any sink or spout into such sidewalk...or shall throw... any spoiled meat, or fish, or any other offensive substance onto such sidewalk, street, lane or alley."<sup>34</sup>
- 4.

July 1, 1826:

- "1. ..the owner or occupant of every lot...is required to have...a necessary with a vault at least six feet deep, well stoned under the same, ...penalty of 25 dollars for violation.
2. The occupant of every lot, shall cause one peck of lime to be emptied into the vault of such necessary once in each month...penalty of five dollars.
3. A well covered drain is required from the sink spout of every house to convey the wash of the house to some...proper sewer...penalty of two dollars.
4. Penalty of two dollars on every person who shall suffer any stagnant water to stand on any lot in the village.
5. Penalty of five dollars on every person who shall throw...any dead animal, putrid meat, fish, or any other offensive substance into any river, canal, canal basin, mill race, aqueduct or sewer.
6. Every person occupying any cellar...is required to drain same of all standing water, and clean it of all rotten or decayed vegetables and all other offensive or putrid substance...penalty of five dollars.
7. No person is permitted to keep any hog in a pen or yard in such manner as to incommode any person residing near thereto, by reason of the smell or stench arising therefrom...penalty of two dollars a day.
8. No person is permitted to suffer any hog to run at large in the street...penalty of 50 cents. Any person is authorized to drive any hog to pound which is found running at large -- the owner shall pay 25 cents for such hog so empounded and six cents a day for keeping."

The nuisances, as may be seen, were primarily aimed at keeping the city physically clean. The "necessary", an outhouse in 1832 parlance, was requisite to every abode. Considering the epidemiological factors, it is to be noted that the necessities were each separate, with common sewer drainage or direct drainage into the river.

The emphasis in the new list of nuisance ordinances was based on a desire to cut down the suspect "noxious effluvia" by the use of lime (see later). (The new ordinances were, in part, repetitions of previously cited ordinances which are here deleted.)



- "1. The owners or occupants of all cellars having therein any putrid or offensive vegetables, or other matter or mud which has become offensive from lying in such cellar shall cause the same to be immediately cleaned out and the materials removed, buried, ...or mixed with lime.
2. The owners or occupants of all back houses and privies which shall from their situation be offensive to smell and which shall have vaults under them shall put into ..them from time to time, a sufficient quantity of lime to destroy all noxious effluvia.
3. In all cases...(where) the filth under the (privy) shall rise to the top of the earth, the owner or occupant shall forthwith cause the said backhouse or privy to be moved and placed over a new vault.
4. All streets....shall be immediately cleansed from filth... and if the same...be offensive shall sprinkle fresh lime thereon.
5. Every owner...of every stable...shall cause without delay, the manure and deposits from the same to be removed without the village...and shall sprinkle fresh lime about.
6. Owners...having any drain or sink...which shall have become offensive, shall forthwith cause the same to be cleansed."<sup>35</sup>

That the city had an effluvious atmosphere all its own is pointed out by "a citizen" in a letter to the Daily Advertiser of June 21:

"There are a great many nuisances in our village that require immediate attention. There is hardly a cellar in the village, that is not in a very unhealthy state; and cisterns, wells, sinks, etc., are very generally in the same condition. The Canal basins are filled with every kind of putrid and noxious substance, and send forth upon a warm day, the most unwholesome exhalations. There are many old, deserted buildings, that are common receptacles for filth and excrement....."<sup>36</sup>

The Board itself underlines this: "The Board are now making a rigid examination of the premises in the village, and are surprised at the amount of filth which they have discovered."<sup>37</sup> Despite the many ordinances, there were, according to record, only ten prosecuted.

Suits were brought against a house owned by Charles Logan on Kent Street<sup>38</sup>;

against a square at Mill, State, Factory and Platt Streets<sup>39</sup>; against houses on Pine St.<sup>39</sup>, Adams St. and ?lot<sup>40</sup>; against Col. Fitzhugh, the owner of Jail Island<sup>41</sup>; against William Rabeson<sup>41</sup>; against the owners of Johnson's Race<sup>42</sup>; against Mathew Head for a nuisance on Buffalo St.<sup>43</sup>; and against H.H. Crane, Robert Parker, and Johathan Childs for a nuisance at the corner of Buffalo and Washington Sts.<sup>44</sup>. The effluvia arising from the stagnant canal<sup>45</sup>, which must have been pungent indeed, was entirely ignored and no measures were ever taken to decrease this.

The laxity of the Board in prosecuting offenders may well have been a problem of manpower as noted subsequently:

"The Board of Trustees and the Board of Health, conscious that more is expected of them than either their means or authority will enable them to accomplish...cannot entirely depend upon a legal enforcement of their ordinances and they, therefore, in some measure, rely upon the cheerful and ready acquiescence of the community in carrying into effect...the measures which have or may be adopted."<sup>46</sup>

Though, from those prosecuted, it is evident that the Board was willing to take the bull by the horns when possible, for included in the list of those prosecuted are Colonel Fitzhugh and Jonathan Childs, both prominent citizens<sup>47</sup>.

The concept of a contagious spread of the Cholera through drinking water was, of course, many years distant. Purification of drinking water by boiling, etc., was not practiced, and it is probably safe to say that not a great deal of attention was paid to the relative location of privies and wells from which drinking water was derived.

The problem of cesspools and sewers was everywhere evident.

"Every house had its cesspool which seemed to collect and retain, rather than remove, the refuse matter committed. The wells yielded water heavy with lime and were subject to various pollutions, while the imperfect sewerage could... not be endured. It was said that the sewers fronting Chestnut St. had really no outlet."<sup>48</sup>

The water was supplied by a scattering of public and private wells which were a perpetual source of concern to the Trustees who were frequently called upon to install a pump in a newly-dug well or to drain and clean one that had become foul<sup>49</sup>.

For a city of somewhat over 10,000, sewers were not too plentiful, and those that were in existence were forever being clogged with refuse<sup>50</sup>. The extent of the sewers previous to 1834 were as follows:

Troup St.	3,000 ft.
Rochester House to Buffalo St.	500 ft.
Buffalo St. to river	400 ft.
State and Mumford Sts.	700 ft.
Factory St.	400 ft.
Clinton St. (along Johnson and Stone)	2,000 ft. <sup>51</sup>

The total is less than one and one half miles, and does not encompass even the entire business district. The Board of Health took cognizance of this fact and recommended to the Trustees that sewers be built<sup>52</sup>, although, for the epidemic of 1832, this was too late.

The only suggestion of water communication of the disease, and what may have been the first such suggestion, appeared in the Daily Advertiser as a reprint of a letter appearing in the Albany Argus from Dr. Caldwell of Montreal. He states:

"...you will recollect a small creek or rivulet that runs immediately in the rear of the town and very nearly throughout its whole extent from east to west. (The Cholera) has undoubtedly confined itself in a great measure to the line of that channel, and the small alleys running up to from it; so much so, that I think I am perfectly correct in stating, that 90 cases out of the 100 have occurred on the contagious banks or alleys running from them."<sup>53</sup>

The Trustees on June 18 announced that the ordinance restricting bathing in the public water of the village would be more rigidly enforced and punishable by a fine of two dollars.<sup>54</sup> Though this was, in retrospect, one of the more pertinent ordinances serving to limit the spread of the disease, we may be quite certain that it was not a health measure as such, but one designed to improve the moral or esthetic climate in Rochester.

The use of the chlorides of lime and soda as disinfectants, discovered not ten years previously<sup>55</sup>, was haralded and discussed with all the enthusiasm which was attendant with the introduction of chlorophyll and antibiotics in the present day. The Daily Advertiser states:

"It is the most potent disinfecting agent hitherto discovered, and an instantaneous destroyer of every bad smell. It is an infallible destroyer of all effluvia arising from animal and vegetable decomposition, and effectually prevents their deleterious influence; hence, it is particularly recommended to those residing in epidemic districts. The mixture sprinkled about apartments would prevent the access of contagion to a certain extent around."<sup>56</sup>

William Pitkin, pharmacist, advertises:

"Chloride of lime for cleansing cellars, vaults, drains, etc. Chloride of soda in crystals, and the concentrated liquid with directions for using; --a valuable article, for purifying and disinfecting the air in houses, sick rooms, etc., and neutralizing contagion -- it is estimated the most powerful disinfecting agent known.

"Chlorine tooth wash and paste for cleansing and preserving the teeth and gums; cleansing the mouth, and healing sore mouth."<sup>57</sup>

A quotation from the Albany Courier and Enquirer:

"Chlorine of soda has been demonstrated to be 120% stronger than any other. Let it be applied to every place where the least noxious air exists."<sup>58</sup>

From the Daily Advertiser:

"The chloride of soda...is much more efficient than any other preparation for purifying the air and guarding against infection. It is stated in the New York Commercial Advertiser that experiments have been made by the direction of the public authorities of that city which establishes this fact."<sup>59</sup>

There was evidently no question in the minds of the influential that chloride of soda, particularly, and the related chloride of lime had any even remotely competitive peer for the prevention of disease.

Although reports from England stated that in certain villages, fumigation of streets and lanes by chloride from sea salt and manganese and sulphuric acid had cleared them from the Cholera in a single day<sup>60</sup>, no suggestion arose in Rochester suggesting that they do likewise.

The resolution adopted by the Board of Health providing for the gratuitous use of the miracle disinfectant by the citizenry was discarded, probably for financial reasons, for the next pertinent item read:

"The Board of Health...announces that they have received from New York one Bbl. of chloride of lime to be sold to the inhabitants of the village at one shilling per pound. Amos Sawyer, 34 State Street."<sup>61</sup>

Financing was, quite evidently, a problem for the Board.

The records of the Board's finance are apparently lost, and only vague reference to this problem is found. With the formation of the Board of Health, the Trustees promptly apportioned \$50.00 to the Board<sup>62</sup>. On the sixth of July a meeting of the "freeholders and inhabitants" was held at the Court House "for the purpose of voting a tax to defray the expenses of attendance upon the measure adopted for the protection of the health of the village."<sup>63</sup> Subsequently, the Trustees authorized the Board of Health to requisition money "to an amount not exceeding \$1000."<sup>64</sup> No further reference is made to money matters. However, with a hospital to support and maintain, the poor to provide for, and a journey by Dr. Anson Coleman to finance (see later), it is doubtful that \$1000 was a too generous amount. On a per capita basis, it amounted to less than ten cents per person. For the Board to renig on its promise to provide free lime to the inhabitants is not too surprising.

Meanwhile, with the announcement that Cholera was extant in the New World, both Albany and New York quickly imposed quarantine arrangements, the nature of which at Albany, as cited, was quite similar to that at New York<sup>65</sup>. The resolution states:

"That a quarantine be...declared, on all boats and craft coming to this city by the canal, and all canal boats from the north, on the Hudson River, and that no boat be permitted to approach nearer than one mile from the north bounds of the city...until an examination be had by the health officer...that in his opinion there is no danger from any infectious or pestilential disease from the said boat, her crew, or passengers.....The mayor be authorized to employ persons to be stationed on the different roads and inlets to this city from the north and to prevent the ingress of all wagons and carriages coming into this city with passengers until the same undergo an examination."<sup>66</sup>

Whitehall took a more formidable stand and forbade any foreigners from landing, which action was enforced by armed guard<sup>67</sup>:

Recognizing the fact that action on the part of civil authorities was necessary, and that they had little legal authority for such action, Governor E.T. Throop addressed the legislature as follows on June 21, 1832:

"...It is certain that a very malignant disease...is ravaging the hordes of squalid emigrants... It is caused by inattention to cleanliness, and by enfeebling dissipations and excesses, and may be communicated from one person to another in a tainted atmosphere--...Most of the emigrants who land in Canada direct their course towards the United States, with a view of settling there, and thus expose our fellow citizens to the contagion of diseases which they may bring with them.

No power now exists in any public officer of municipal authority to interfere, to prevent the introduction of disease into the state...I respectfully recommended to you, to pass such laws as may be necessary to enforce a sanitive quarantine.

An infinitely wise and just God has seen fit to employ pestilence as one means of scourging the human race for their sins."<sup>68</sup>

Resultant passage of the necessary legislation enacted on June 22 as follows:

"An Act for the Preservation of Public Health (in abstract)

1. All vessels and all persons arriving at any place within this state from any part of Canada are subject to quarantine.
2. Every city and incorporated village is to appoint a board of health of three to seven members and a health officer.
3. The supervisors, overseers of the poor, and justices of the peace are to constitute the board of health.
4. Power and duty of the boards:
  - a. To determine the period of quarantine; not to exceed fifteen days.
  - b. To fix the duties and salary of the health officer.
  - c. To make regulations in their discretion for all such regulations as they think necessary and proper for.. the preservation of the public health.

- d. To employ persons as necessary.
  - e. Violations of any regulations liable to fine, not to exceed \$1000 and two years imprisonment."<sup>69</sup>
5. All expenses incurred to be charged to the respective countries, levied, collected and paid as other country charges."<sup>69</sup>

The Rochester Board of Health, recognizing that the immediate threat of communication of the disease lay in lake communication with Montreal and Quebec, appointed on June 20, a committee of three to examine all boats coming into the mouth of the Genesee with the authority to "stop all persons coming from abroad, not citizens of this State who are infested with any pestilential disease."<sup>70</sup> Reason for a quarantine at the mouth of the Genesee River became even more evident when, on June 26, Congress passed a bill requiring all emigrants from Canada to land at one of several stipulated places when entering New York State, which places included Plattsburg, Whitehall, Ogdensburg, St. Vincent, Sackett's Harbor, Oswego, Niagara Falls, Buffalo, Dunkirk, and Rochester. With this stipulation came a grant to the state to finance this protective cordon<sup>71</sup>. So far as recorded, these were the only funds contributed to the individual localities from state or national government.

The quarantine was directed to apply only to those who were grossly ill -- a form of quarantine, as we have seen, broadly practiced. Recorded exceptions to this loose quarantine are few, but one worth noting incidentally occurred at New Bedford, Conn. The health officers there were ordered to fumigate all passengers from Providence "not withstanding that they may make objections. Last Thursday, they were



smoked with a compound of rosin, and other villainous ingredients, to the great offense of their nostrils, and damage of their wearing apparel<sup>72</sup>.

A meeting of the Board on June 20 appointed a committee to correspond with other towns and villages relative to methods of protection from the Cholera<sup>73</sup>. No state bureau had been created to ~~correlate~~ <sup>coordinate</sup> and supervise the state-wide program so boldly initiated, although it had been considered<sup>74</sup>. Thus, it fell to the separate towns and villages to interrelate their activities as they saw fit. Among others proximate to Rochester, Henrietta<sup>75</sup> and Brighton<sup>76</sup> are known to have established Health Boards.

Not impressed that quarantines and chlorides were infallible protection, the populace apparently expressed considerable fear which the Board of Health sought to allay:

"...we have never known the place more healthy at the same season. No prevailing disease is abroad, either among adults or children. The story, therefore, that it is not safe to visit Rochester, and which is believed by many, is not true, and shows that it must have passed through numerous 'editions with additions', to have arrived at such a frightful size!"<sup>77</sup>

Business was affected in various ways. The Life Insurance Companies were "completely run down with applicants"<sup>88</sup>. A few of the more apprehensive left town, as this merchant who noted on his door:

"Not Cholera sick, nor Cholera dead, but out of fright,  
from Cholera fled;  
Will soon return, when Cholera's over, if from his  
fright he should recover."<sup>79</sup>

Most, apparently, stayed in the city, and, in the best traditions of free enterprise, made the most, propaganda-wise, of the situation. Sam Bascomb, proprietor of a lottery service, quite legal in 1832, ran this ad:

"If any person is afraid of being suddenly swept from this world by the great reformer of the Eastern Continent, ... and who fears that reversed and aged parents, beloved children, or esteemed friends will be thus suddenly left to the cold charities of the world; he had better improve the present opportunity of putting himself and friends beyond the reach of want. Bascom, at the Luck Stand (corner of Buffalo and Exchange) is authorized by the State of New York to sell Fortunes for only four dollars."<sup>80</sup>

W. Barron Williams who advertised that he was "selling goods at cut-rate prices to raise money for the due payments" headlined his advertisement; "CHOLERA IN ROCHESTER", evidently only to draw attention, for the remainder of the article discussed the magnificent bargains available<sup>81</sup>. A dry goods store competitor, L.L. Peet, however, countered on the following day:

"CURE FOR THE CHOLERA"

"Any person who should be so unfortunate as to get the Cholera in consequence of purchasing goods in State St. at cost, will find a sure remedy by applying at No. 16 Buffalo St. where they can have goods, not at cost, nor less than cost, but cheaper than in any store where they have the Cholera."<sup>82</sup>

I.W. Mather commenced, in mid-July, to feature an ad yet more morbid:

"The subscriber manufactures and keeps constantly on hand ready made coffins of all sizes and qualities at his shop on Buffalo St."<sup>83</sup>

On the national scene, the New York stock market was reported as follows:

"The Cholera news from Canada with the probability that it will soon be in this and the other cities of the States, produced almost an entire stagnation of affairs."<sup>84</sup>

The State Legislature also passed a bill stating that if any Board of Health in any area declared a malignant disease to exist there, any court then in session might adjourn to some other place, and any banks might change their place of business<sup>85</sup>.

Meanwhile, the Cholera spread. From Quebec and Montreal, it was reported at St. John's and Laprairie June 12<sup>86</sup>; at Cornwall<sup>87</sup>, York, Coburg and Whitehall<sup>88</sup>, and Prescott<sup>89</sup> by June 18<sup>90</sup>; at Burlington and Plattsburgh<sup>91</sup> by June 19; at Kingston on June 20<sup>92</sup>; on June 21 it was reported that a group of emigrants on board the Massauga Chief had anchored at Niagara Falls with Cholera among the passengers<sup>93</sup>. Danger from the east via the canal became apparent with the following report from the Albany Argus of June 18:

"Two emigrants who jumped from canal boats obtained work in this city. One soon died of the Cholera... Directions were immediately given by the Police Magistrate and Deputy Health Officer...to burn all the clothing of the deceased; and measures were taken to prevent communication (of the disease)."<sup>94</sup>

To facilitate the carrying out of the necessary precautionary measures, the Board appointed yet two more, a Health Commissioner, William Brewster<sup>95</sup>, "to see that all ordinances were carried into effect"<sup>96</sup>, and a Health Officer, William W. Reed, whose duties were:

"To examine all persons coming in from the Canadas or any other place infected or supposed to be infected, and if in his opinion such person shall...endanger the health of this village, he shall forthwith cause him to be removed to some place of safety.....power to inspect dwelling, taverns, and carriages...authorized to examine any patient sick or supposedly sick with the Cholera and to make daily reports to the Board of the number of cases, number of deaths, and number of those discharged or cured. He shall have charge of the hospitals and of the sick confined therein with Cholera. He shall from time to time recommend to this board such measures as he may think necessary and proper to be adopted for the health of this village. In case any poor person shall be attacked...(and) unable to procure the necessary medical attention...he shall forthwith...be removed to the Public Hospital."<sup>98</sup>

Subsequently, it was stipulated that he cleanse and purify the house and clothing of those who died at home<sup>99</sup>. The derived power for these acts was drawn from the recently passed State Statutes and the penalties were those indicated in the Statutes.

Though the Board passed a resolution authorizing "the employment of a man and a vessel to ride off the mouth of the Genesee River, and along the coast of the County of Monroe (to rigidly enforce) the usual quarantine regulation"<sup>100</sup>, no quarantine was established by the village for those entering along the canal until August 2<sup>101</sup>. Most likely, the quarantine established by the Brighton Board of Health -- "east of the lock near Thaddeus Patchen's to the Pittsford line"<sup>102</sup>, was assumed to suffice for the defense of Rochester.

The Health Officer was placed in charge of the hospitals, although there were no hospitals procured until the middle of July. By this time, "hospital" was singular.

"A spacious and commodious building has been provided to be used for a hospital, where those persons can be provided for who may be attacked with malignant diseases and who are destitute of a home or friends to provide for their wants and necessities. Beds, linens, and other necessaries are prepared... It is not the intention of the Board that any person shall be removed from their places of residence against their own wishes, or who can be provided for at home."<sup>103</sup>

The concept of using a hospital for those ill with the epidemic was one of charity, quite obviously unrelated to isolation measures taken today to prevent disease communication within a community.

In considering the preparations for defense, we must not overlook the religious and temperance societies, potentially strong after the great Presbyterian revivals of Finney not two years previously<sup>104</sup>. For though there is nothing to indicate that they aided the material cause or altered or influenced to great degree the preparations, their oratorical voice was strong. Said one religious voice:

"I am required to regard this scourge as a special visitation of God, challenging mankind to forget their sins and turn to Him."<sup>105</sup>

With the announcement of the outbreak of Cholera in Quebec, the pastors collectively presented to the Trustees a petition that Friday, June 22, be observed in "humiliation, fasting and prayer...in reference to the impending pestilence", and further recommended that all stores be closed and business suspended<sup>106</sup>. The Trustees declined, stating:

"Whereas the said Trustees believe that all interference in Ecclesiastical affairs to be foreign to their duties as a municipal body...Resolved, that we deem it inexpedient to adopt any measures in relation to (said subject)."<sup>107</sup>

This formally observed dichotomy of church and state as a tradition of government was extensively and strongly implanted throughout the United States with formal precedent established at a national government level by President Jackson in response to an ecclesiastical request<sup>108</sup>.

Despite no official authorization, the various pastors garnered sufficient public feeling for the project and Friday, June 22, was finally spent in "humiliation, fasting and prayer".

The temperance societies enjoyed a field day, for as it is stated: "Among all the discordant opinions which have been advanced...in one particular most men agree, that intemperance...is very dangerous."<sup>109</sup> The Rochester Observer (May 2), in a crusading tone confusing temperance and abstinence, says:

"The Cholera appears to have been sent by Providence at this time to aid the cause of temperance, to give practical demonstration that the use of Ardent Spirits invites disease. Let us anticipate its approach...by throwing over our village the broad shield of temperance. Let the destroyer, when he arrives find that his sharpest arrows are blunted against it."<sup>110</sup>

The cause of the intemperance they attribute to the physicians:

"At no time within our remembrance has there been so much intemperance among the people and we lament to say that it arises from perversion of a prescription intended as a remedy for the sick and not as a beverage for the healthy."<sup>111</sup>

They suggested as a remedy, unique if nothing else, that "a sign be hung over every groggery stating 'CHOLERA MORBUS SOLD HERE', and that the officers who license them be called 'Cholera Morbus Officers'". To this is appended the statement, "We intend no disrespect to our worthy village trustees."

The temperance societies in the 1830's were just coming into prominence, countering what was probably a marked increase in general alcoholic consumption as a result of the introduction of distilled beverages. It is worth noting that Rochester was described at this time as being "divided into two classes, the temperance men who used it in moderation and the intemperate who indulged it to excess, while drunken men in the streets were common"<sup>112</sup>. The "temperance" movement was spreading like wildfire and had a strong evangelistic flavor which was not in the least dampened by a very strong Methodist backing. The Cholera, raging among the poorer classes, primarily, with their primitive plumbing and poor drinking water, and incidentally-present large group of alcoholics, was, for the temperance societies, a wonderful boon, Heaven-sent.

The stories of associated drinking and Cholera are legion; to cite a few of those published strictly as news items in the Rochester papers is to gain an appreciation of a certain gullibility present among even those not immediately concerned with the temperance societies:

"Among the colliers in New Castle who are Methodists, no deaths."<sup>113</sup>

"A lake Captain went to a public house, stepped to the bar and demanded in a boisterous tone, 'a gill of Cholera!' He drank it. He went to a fellow Captain dying of Cholera, took hold of him and shook him, saying, in sport, 'Tell the old fellow that I shall be along soon!!' The wretched man was immediately seized with the disease and died, in the utmost agony, in a few hours."<sup>114</sup>

"In Albany in two small rooms of which some six or seven persons were occupants, the inmates drank on Tuesday, three quarts of whiskey. On Wednesday, two of them, a father and son, were dead, the mother was beyond recovery, and another had been seized. The two last died Thursday."<sup>115</sup>

"Of 350 members of a temperance society, there was only one death. This speaks volumes."<sup>116</sup>

Quite conclusively, the New York Commercial Advertiser states:

"Should the Cholera visit our city, every drunkard and every tippler of high or low degree, may consider his fate as sealed. The use of tobacco also, in all its forms, is particularly dangerous."<sup>117</sup>

As the city began to regather itself after the initial startling announcement that the Cholera had invaded the New World, people apparently sought preventive and curative medicines for the Cholera, not entirely from their physicians, nor on the published recommendations from the Board of Health, but rather from the many patent medicine houses extant in that day. That this was prevalent well prior to the outbreak of the disease in Rochester is evident from this warning issued by the Board of Health on July 9:

"The Board of Health have observed with concern, the extraordinary industry of persons in the business of selling nostrums, patent and other species for the cure of every evil or disease. In times of excitement...the ignorant and credulous are sadly imposed upon by those unprincipled pretenders...The Board earnestly...urge their fellow citizens not to be duped into the purchased of that which they cannot...have the least confidence."<sup>118</sup>

What these compounds were cannot be ascertained. Very probably they were herbs, primarily, with very little bearing on the outcome of the disease. Those which had, in some manner, some pretense of being a



specific for gastrointestinal complaints or the Cholera, I have compiled from the Rochester papers of the day in the supposition that these were the ones probably most used by the populace:

"Ad: Dr. Hitchcock's Golden Balsam and Grand Restorative. For curing nervous and consumptive disorders, coughs, colds, hoarseness, depression of the animal spirits, trembling of the nerves, difficulty of breathing, weakness of the lungs and breast, dysentery, or loose state of the bowels. In many cases it has eradicated the disease even after most practitioners would have pronounced the case incurable." L.B. Swan Buffalo St." 119

Usual assortment of patent medicines:

"Dr. Relfe's Botanical Drops for that class of inveterate Diseases, produced by an impure state of the blood, or for a vitiated habit of body, a Spring or Autumnal Phisic to purify and cleanse the system from humours, to aid the process of digestion, to purify the blood, and to prevent the secretion of malignant humours on the lungs.  
Wm. Pitkin Buffalo St." 119

"Dr. Marshall's Ambrosion of vegetable composition, perfectly innocent, guaranteed to purify the blood. A cure for Scrofula, ulcerated sore throat, secondary syphilism in its worst forms, chronic rheumatism, derangement of the stomach attended with puking, shingles, blotches of the face, etc.  
L.B. Swan 41 Buffalo St." 119

"Butler's Effervescent Magnesian Aperient for dispepsia, indigestion, gout, gravel, etc., imparting to the constitution all the benefits of the congress water at Saratoga.  
Wm. Pitkin." 119

"Dr. H. K. Warren's Medicines selected from the great garden of nature. Dr. W's Antiphlogistic Plaster which has proved itself superior to anything of the kind ever used for pain in the stomach, side or elsewhere, or for any internal inflammation; his Strengthening Plaster for weakness of all kinds; his white powders, a sure cure for the Cholera Morbus; etc.; and, finally, all kinds of medicine requisite for the cure of any and every disease.  
George Bartholick Buffalo St." 119

The specifics for Cholera were as follows:

"Ad. Preventive for the Cholera

The subscriber would inform the public that he has constantly on hand a Medicine warranted to be the same kind as used at Montreal and Albany, and out of 1,000 persons who used it at the former and 1,500 at the latter place, not one has been known to have had the Cholera.

George Bartholick."<sup>120</sup>

"A CURE AND PREVENTIVE FOR THE CHOLERA

The recipe was brought to the village by a person directly from Scotland where it was then raging. It merely consists of a Plaster of the value of two shillings to be applied to the pit of the stomach, and worn as a preventive; and a mixture in a small vial of the value of one shilling six pence, to be carried in the pocket and drank the moment the symptoms are felt. It is stated authentically in a Scotch paper which can be seen at the store of the subscriber, that not one individual has been seized with Cholera during its progress there who had applied and worn the plaster, and that on 10,000 persons who used them in Germany in the infected districts, not one of them caught the disease.

L.B. Swan 41 Buffalo St."<sup>121</sup>

The Rochester Republican of July 31, suggested that there was no better preventive than a tablespoonful of the pulverized charcoal taken in milk or water on going to bed<sup>122</sup>.

Of all the patent nostrums used, it is stated that camphor was the one chiefly relied upon, and was so much in demand that the price rose from 30¢ per pound to several dollars<sup>123</sup>. A reason for this jump in price is evident from a report in the Anti-Masonic Enquirer which states that a druggist from New York, seeking to corner the market on camphor, offered to buy the entire lot of each of the drug stores at a profit to the druggist of 150%<sup>124</sup>.

How the camphor was used is not made clear except from a report from Montreal which states that there the camphor was placed in a bag and held to the nose<sup>125</sup>, evidently serving to prevent the inhalations of "noxious effluvia".

Of interest is the organization which gradually took form to protect the health of the village and to carry out the various aspects of the program. Nowhere is it stated that any of the officials involved received remuneration for their services. With the program on a purely voluntary basis, it can be more readily understood why such a legion of functionaries existed. The governing body of the village was the Board of Trustees, to which was responsible the Board of Health, who in turn appointed and supervised the various committees. The Board of Health was quite evidently the focal point of the program, and it was to them that the Board of Physicians was responsible, along with the Health Commissioner and the Health Officer. The committee of eight drew up the original health program and were subsequently dissolved with the formation of the original Board of Health. The Committee consisted of Drs. Reed, Mathew Brown, Jr., and Anson Coleman; the Rev. Dr. Penney, Rev. Whitehouse; and Generals Mathew and Jacob Gould<sup>126</sup>. The Board of Health formed June 19, consisted of sixteen men: Dr. Brown, president; Isaac Hills, secretary; General Gould, James Livingstone, Simeon Ford, Jacob Thorn, Levi Ward, Jr., O.N. Bush, Ashbel Riley, Warham Whitney, Lyman Langworthy, Naaman Goodsell, William Brewster, Oran Sage, William Atkinson, and Patrick O'Mealy<sup>127</sup>. The state legislature soon decreed that a town's Board of Health should consist

of seven men, and, hence, on June 25 the original Board was dissolved and a second Board formed with: Dr. Brown, president, and Jacob Gould, secretary<sup>128,129</sup>. The remaining members served as follows: Levi Ward and James Livingstone --throughout the epidemic<sup>130</sup>;

Isaac Hills	-- 6/25 to 6/26	131,132;
Wm. Brewster	-- 6/25 to 6/26	131,132;
Naaman Goodsell	-- 6/25 to 8/1	131,135;
Wm. Atkinson	-- 6/26 to 7/10	132,133;
Ashbel Riley	-- 6/26 to 7/21	132,134;
Evard Peck	-- 7/10 to end of epidemic	<sup>133</sup> ;
Samuel Andrews	-- 7/31 to end of epidemic	<sup>134</sup> ;
Fred. Shittlesey	-- 8/1 to end of epidemic	<sup>135</sup> .

The Board of Trustees consisted of: Jacob Thorn, president; Samuel Selden; William Rathbun; Daniel Tinker; Birin Gibbs; A.W. Stowe, clerk; Ebenezer Ely, treasurer; Seth Simmons, collector<sup>136</sup>.

The Health Commissioners were: William Brewster, 6/26 to ?<sup>137</sup>; Mr. Haywood, ? to 7/28<sup>138</sup>; Ashbel W. Riley, 7/28 to end of epidemic<sup>138</sup>.

Assistants to the Health Commissioner by wards: I Jeshial Barnard; II Asa Weston; III Martin Wilson; IV William Wilbur; V L.K. Faulkner<sup>139</sup>.

The Health Officer throughout was William W. Reid<sup>140</sup>.

Assistant Health Officer from ? to 7/28 was Ashbel Riley<sup>141</sup>.

Assistant Health Officer for boats at Screw Dock and Fitzhugh Basin was George Pratt<sup>142</sup>.

Assistant Health Officer for boats at Magne, Jones and Barhydt's Basin was Simeon Alcott<sup>142</sup>.

Assistant Health Officer for boats at Gilbert Basin was Joseph Halsey<sup>142</sup>.

Assistant Health Officer for boats at Child's Basin and Slip was Elijah Smith<sup>143</sup>.

Board of Physicians: J.D. Henry, president; W.W. Reid, secretary<sup>144</sup>; remaining members are nowhere noted.

Physicians to look into all cases not under the care of one of the board physicians: Dr. F. F. Backus; Dr. Anson Coleman; Dr. A. W. Smith<sup>145</sup>.

Auditer of Accounts: James K. Livingstone<sup>146</sup>.  
Committee of Finance: Levi Ward, Jr.; James Seymore; Abraham M. Schermerhorn; Jacob Gould; O.N. Bush<sup>146</sup>.

The variety of lesser committees and groups is plentiful and as follows:

Committee for procuring and depositing lime in each ward:  
I. William Brewster; II Mathew Brown, Jr.; III James K. Livingstone; IV Ashbel W. Riley; V Levi Ward, Jr.<sup>146</sup>.

Committee for discovering, ascertaining and removing nuisances, by wards: I Wm. Brewster and Oran Sage; II Mathew Brown and Naaman Goodsell; III James Livingstone and Isaac Hills; IV Wm. Atkinson and O.N. Bush; V Levi Ward and Patrick O'Mealy<sup>146</sup>.

Committee for abstracting ordinances on nuisances: Simeon Ford and John Bowman<sup>146</sup>.

Quarantine Committee: Jacob Gould; John Bowman; Simeon Ford<sup>146</sup>.

Hospital Committee: Mathew Brown and Ashbel Riley<sup>146</sup>.

Committee to correspond with other towns and villages: Simeon Ford; Jacob Gould; Levi Ward<sup>147</sup>.

Official Distributor of lime for the village: Amos Sawyer<sup>148</sup>.

Committee to examine boats entering at the Genesee: Frederick Bushnel; William Latta; Giles Holden<sup>149</sup>.

Charitable Committee to concern and distribute funds or necessaries for the benefit of the poor: E.D. Smith, chairman; L.W. Sibley, secretary; Willis Kempshall, treasurer; I Wm. Brewster; John Haywood; II Kempshall, George A. Avery, and Wm. Rathonn<sup>(151)</sup>; III E. Smith, L. Sibley; IV Anson House, R. van Kleeck; V Jacob Graves, Abner Wakely<sup>150</sup>.

Superintendent of the hospital: Constable Seth Simmons<sup>152</sup>.

The number of physicians practicing in Rochester in 1832 cannot be ascertained, though in 1827, there were twenty-five<sup>153</sup>; in 1838, twenty-one practicing and thirteen either retired or in other businesses<sup>154</sup>.

The accepted treatment, means of prevention, etc., for the Cholera were, as we have seen, initially taken in toto from the report presented by the Edinburgh Board of Health. The Rochester Board was, however, not satisfied with this or with the numerous other reports which filtered in via the newspapers. Soon after formation, the Board sent Dr. Anson Coleman, one of the foremost and most active local physicians, to Montreal to ascertain for them personally that the disease was truly the Cholera, and, in addition, to gather information on the diagnosis of the disease and the means of prevention and treatment<sup>155</sup>. Meanwhile, they caused to be printed a report of their own on treatment:

- "When an individual is attacked --
1. Place the patient in the most spacious, airy chamber.
  2. He should be placed in a warm bed in the center of the room, having as few attendants as possible.
  3. Limbs and extremities should be severally rubbed with dry flannel or a brush, and dry heat should be applied to the feet. To follow the application of mustard poultices to the feet, legs, wrists, stomach, and bowels. This is the most important object of attention, i.e., restoring heat to the surface.
  4. If any drink -- peppermint or spearmint water, chicken broth or tea, rice-water, or toast water.
  5. The greatest quietude should be enjoined upon the patient, and every argument should be used to induce him to remain quiet upon his back in bed. For evacuating the bowels, (he) should use suitable bed apparatus.
  6. Much caution should be observed in regard to remedies prescribed in foreign cities where the climate and habits of the people differ very widely from our own."<sup>156</sup>

Dr. Coleman's reports, for reasons unknown, were not published until the middle of August, but were made available to the physicians previous to, or very near to, the onset of the epidemic in Rochester. Since these were of some considerable bearing, I quote extensively

from those reports which he submitted. The first, read before the Medical Board of Rochester on July 16 describes principally the diagnosis and treatment:

"I conceive it would be of practical utility to distinguish Cholera into three stages -- the stage of Incursion, of Collapse, and Re-action. These...characters so strikingly marked, require so much difference in treatment, that it appears not a little surprising that some such division has not already been made.

"The symptoms which mark the first stage...are a loss of appetite, thirst, painful sense of distention of the stomach and bowels, furred tongue, nausea, and watery discharges from the bowels, with occasional spasms in the arms and legs...After the diarrhea..., vomiting sets in, accompanied by a sense of fainting, sometimes with vertigo, great muscular debility, increased discharges from the bowel, feebler respirations and circulation, sense of inward heat, and more frequent spasms.

"A remarkable change now soon takes place constituting the second stage of Cholera. The skin over the extremities becomes cold and clammy, and of a dark blue color, the features lose their fulness and expression; the fingers and toes...assume a shriveled parboiled appearance, the pulse sinks rapidly, or even ceases at the wrist, respiration is feebly performed, spasms and discharges by vomiting or stool usually continue, while the abdomen becomes more humid.

"The patient...complains of very little pain, but seems as if half-dozing. If these symptoms be not speedily arrested, the case runs on rapidly towards a fatal issue. The whole surface now changes to a livid color: the tongue, nose, lips, and extremities become deadly cold...and with one or two copious watery discharges from the bowels, death closes the scene.

"This reaction constitutes the third stage...and is invariably met with when we are unable to rouse the system from the depression of the second stage. In the treatment...(of) the first stage:.....

"...the patient should be put to bed, or at least confined to a comfortable room; all drinks should be prohibited; clothing should...keep his skin warm; and if he be of a plethoric habit, or is attended with fulness of the abdomen and tenderness on pressure, should be freely (and in some cases) largely bled...I am led to believe that in

"...a vast majority of cases the patient would be snatched from...death if freely bled during the first stage of the disease.

"After bleeding some cathartic medicine should be given...I should prefer calomel to every other; and this if the spasms be severe should be combined with opium. If the spasms were not severe I would...endeavor to allay (muscular) irritability by external stimulants rest in a recumbent posture, and dry but moderate heat.

"Next to calomel as a cathartic, I would prefer castor oil...

"Should there be great difficulty in procuring the operation of cathartics, a repetition of the bleeding, or the local detraction of blood by means of cups or leeches would be necessary.

"After free evacuation by cathartics...the patient may be indulged in taking a little barley water, tea or arrow root but this must be with very great caution, lest the gastric symptoms be increased.

"...keep a warm and...healthy state of the skin.

"In the second stage, place him immediately in a warm bed, and give him..., from half an ounce to one ounce of camphorated tincture of opium and exhibit the same quantity by enema. After this, dry heat should be applied to the extremities, and very warm mustard poultices to the wrists, ankles, and epigastrium...The sulphate of quinine, in doses from two to five grains dissolved in a little wine, should be given. This should be repeated in such doses and...intervals, as the urgency of the case demands.

"Should the symptoms seem to demand other diffusive stimuli..., I would...give equal parts brandy and hot water.

"If a marked reaction can be produced, the quantity of every kind of stimuli should be lessened and...treatment ...suited to the third stage (started).

"This consists in relieving...as promptly as possible, the congested and suffering organs by venesection while we aid its operation by continuing the counter stimulants and keeping up external heat. No part of the treatment is of more importance...than the prompt and free detraction of blood so soon as the reaction is sufficient to cause it to flow.

"Immediately after venesection, from 15 to 20 grains of calomel should be exhibited, which is to be repeated, or followed by castor oil in case it does not produce a free operation. If spasms are severe one or two grains of opium may be combined with the calomel.



"...the primary affection (is) ...and inflammation of the mucous coat of the stomach and intestines...this inflammation forms not only a point of irritation, by which an increased quantity of circulating fluids is directed to the central organs, but from its suddenness and extent... to paralyzes the ganglionic system of nerves so important to the preservation of healthy organic action.

"...the chain of healthy vital action becomes broken, suffering the system to run quickly on to the development of those symptoms which constitute the collapse...other divisions of the nervous system...therefore become assailed, through the irritation excited in the brain and a spinal marrow by the primary disease, producing spasms in the voluntary muscles, et al."<sup>157</sup>

Though Dr. Coleman's report probably proved the strongest influence, the newspapers printed numerous other impressions which, in essence, agreed with Dr. Coleman but also provoked some controversy as to what was the proper treatment:

Referring to the Cholera in England: "Some are bled and recover; others are bled at another stage and die. Some will give no drink, others only hot drink; while one kind man gives them as much cold water with a teaspoon of brandy as they please."<sup>158</sup>

Dr. Caldwell writes from Montreal: "I give them 10 to 15 drops of hydrag. cum creta and in two hours, follow it by Tart. Potassae, two drachms in a little warm veal or chicken broth and repeat it freely every two hours...I do not know of anyone who went through the treatment that was subsequently attacked with Cholera...Where the tongue was much loaded, I added two or three grains of the submuriate to it."<sup>159</sup>

From the New York Courier of June 19: "No case of Cholera has ever occurred which has not been preceded by a buzzing in the ears and a looseness of the bowels, and that a powerful cathartic taken at this stage of the disease, is a CERTAIN and INFALLIBLE cure."<sup>160</sup>

A letter from Mr. A. H. Stevens: "If there be a furred tongue, give a dose of castor oil or of rhubarb and magnesia with mint

"water or in bilious habits, six grains of calomel followed by salts. After any of these, a few drops of laudanum should be given and the patient kept in perspiration with warm cat-mint or other herb teas.

"If the tongue be clean, it is of great importance to regulate the bowels without medicine. The taking of medicine should be regarded as a choice of evils, a deranged state of the digestive organs often follows the use of medicine."<sup>161</sup>

Two letters openly expressed controversy with Dr. Coleman. These letters contained in part identical phrases and expressions, and may well have been written by the same person or by two separate individuals drawing on common source material. They were, however, not published until the epidemic was drawing to a close and probably had little bearing. They are interesting, however, from the standpoint that they express certain theoretical concepts of the disease.

"...All my experience and observation tend to convince me, that this disorder is a rapid decomposition of the animal economy; that all the blood, fluid and fleshy parts of the system, are suddenly converted into a watery matter and instantly rejected; that the evacuations carry off all the mucus from the interior of the stomach and bowels; that to replace this mucus is the first object in its cure; mucilaginous drinks are the safest and most effectual, if not the only remedies."<sup>162</sup>

There was published in the Genesee Farmer on September 1, a letter from R.M.W. of Middlesex, dated August 24:

"I consider the bile as the regulator of the bowels. So long as this secretion is healthy, and flows regularly into the bowels, they are rarely if ever disordered...this secretion is totally suspended in the Cholera. To rouse the bile and lead it into the bowels seems to me, then, the first object in the cure of the disease.

"Take: ½ oz. of gum gamboge  
 1 oz. of rhubarb  
 1 oz. of sulphate of potash  
 2 drachms of calomel

Reduce these to a fine powder...moisten with molasses or honey...then form into pills. One or two of these pills given every two hours in the first stages...will restore the natural order of the body. Two drachms of Tartar emetic, or half an ounce of Ipecacuhana may be substituted for the gum gamboge...the rhubarb will lead it (bile) into the bowels, the sulphate of potash will act as a gentle diuretic and calomel will promote the secretions generally."<sup>163</sup>

The idea that the disease was manifestly quite different in different places and deserved varied treatment depending on the course it took was expressed by one citizen who prefaced the letter; "I am not a physician and consequently can give no advice upon a subject so important!"<sup>164</sup> All asides to the contrary, he, among many, felt prone to give advice:

"In Asia, the disease appeared to be purely of a congestive and bilious character, the spasm only occurring in the last stage of the disease. Calomel, frequently preceded by an emetic, external frictions and applications, and...blood letting to equalize the circulation were for a time the most effectual remedies.

"In Russia the disease lost most of its bilious character and assumed more of the spasmodic form; hence it was treated most effectually with antispasmodics. In France an entirely new mode of treating the disease was found necessary. In character and treatment it has not been the same in any two places.

"I would most strenuously advise everyone not to give any powerful internal remedy, especially since most of those before the public would but paralyze the stomach... the Edinburgh Prescription was made out (for the) month of December and in a different country and before any of them had seen a single case."

"A Citizen"<sup>164</sup>

Whether sentiment such as this had any bearing on the Health Bureau's decision to dispatch Dr. Coleman to Montreal is nowhere stated.

There was little place for conservative therapy. A not uncommon regimen was propounded by one, Xavier Chaubert of New York, who dogmatically insisted that "the disease is to be injured and rendered fatal by bleeding, mercury and opium." He claimed to have treated 528 with but four deaths and sought to induce the New York Board of Health to appoint someone to examine his principles but to no avail<sup>165</sup>. Bleeding was the accepted treatment and bled the patients would be.

Preventive medicine was a subject even more extensively dealt with than treatment. Though the Edinburgh report dwelt on this in some detail, the Board of Physicians compiled their own modified list. In abstract, these were:

- 1) No sudden changes of living either as to diet, exercise, or sleep, should be made.
- 2) Avoid fatigue of body and mind.
- 3) Whenever the weather is hot, great danger arises from too liberal a use of cold water or small beer; better suffer a little thirst than drink one ounce too much of liquid of any kind.
- 4) Eat moderately.
- 5) Avoid the night air especially if the day has been hot and you have been fatigued.
- 6) Never sleep with your windows raised.<sup>165</sup>

A listing from the Commercial Advertiser (N.Y.) quoted in the Genesee Farmer recommends (in abstract):

- 1) Confidence and submission in the day of calamity.
- 2) Dry, clean streets.
- 3) Whitewashing of the habitations of the poor and removal of the filth from them.
- 4) Dispersal of the inhabitants of crowded habitations.
- 5) Removal of inhabitants of cellars and damp situations.
- 6) Circulation of the cars more frequently to remove ofal.
- 7) Avoidance of the night air by wearing flannel next to the skin.
- 8) Avoidance of cold bathing in a state of perspiration.

- 9) Keeping the feet warm and dry.
- 10) Avoidance of every species of ardent spirits as a poison, with avoidance of iced and acid drinks.
- 11) Consumption of good beef, mutton, lamb, fresh eggs, rice, good white bread, biscuit, asparagus, potatoes, peas and beans if young and tender.
- 12) Avoidance of crowded assemblies, especially in the evening.
- 13) Avoidance of every species of intemperance.<sup>166</sup>

A letter from A. H. Stevens published in the Genesee Farmer on July 21 recommends (in abstract):

Avoid all those causes which are apt to derange the bowels:

- 1) Drugs as preventives.
- 2) Sudden diet change.
- 3) All green watery fruits and vegetables -- especially uncooked.
- 4) Fresh bread.
- 5) Shell fish (except hard clams).
- 6) Salted meats, smoked meat and fish.
- 7) Improper drinks, acid and all other wines and cider, cold drinks, too much drink of any kind or a change of water or drinks.
- 8) Over-heating the body or getting heated after food or drinks.
- 9) Agitating the mind or taking food or drink when agitated.
- 10) Exposure to the night air if damp or sleeping with the window open or in a draft.
- 11) Want of sufficient covering, especially over the abdomen.
- 12) Go to bed cool; don't sit up late; rise early.<sup>167</sup>

J. R. Rhineland, the Quebec correspondent for the New York Standard compiled yet another listing which was published in the Genesee Farmer. He also mentions the necessity of "confidence and submission"; the need of abstinence from alcoholic beverages, green vegetables and unripe fruits; the necessity for early hours; the avoidance of crowds, and adds:

- 1) Port wine in moderation should be used when any symptoms of oppression or sinking occur.
- 2) Keep from the streets during the heat of the day.

- 3) Never walk in the sun without an umbrella.
- 4) Avoid impure atmosphere.
- 5) Let the clothing be flannel to keep up an action on the skin.<sup>168</sup>

Dr. Coleman's report to the Board of Health on July 12 was almost superfluous in light of all that had been written and published already in the Rochester papers. Since his report was of an official nature, however, it is best that it be recorded:

"The only features connected with the spread of Cholera in Montreal which seemed to be of practical importance are:

- 1) Localities where the disease first appeared and proved afterwards most fatal...occurred in the vicinity of the 'Creek' and low and filthy ground which borders it.
- 2) Dwellings...the miserable, low, and ill-ventilated houses.
- 3) Number of persons crowded together...four, five or six often died in one house where crowded together.
- 4) Habits of men...intemperance in eating and drinking. It was the current remark in Montreal that not a single drunkard seized with the Cholera had recovered. An occasional intoxication or even the more moderate indulgence of dram-drinking, not only predisposed to Cholera, but excited it in a vast number of instances.
- 5) In regard to eating...the greatest agency in exciting Cholera, were radishes, cucumbers, currants, and green peas...Fresh fish was said to have produced many cases ...Fresh pork was considered an improper article of food...Liquid food, especially the broths and soups... were...considered a very bad diet."<sup>169</sup>

In summary, the principal preventive means were of four general classes: 1) The usually accepted good health practices, of cleanliness, decreased crowding in habitations, "early to bed and early to rise", avoidance of crowds, good mental health, moderation in all things, etc.; 2) avoidance of those conditions which were generally thought to precipitate "colds" and other infections, e.g., drafts, dampness and cold; 3) avoidance of those things which in any way produced a diarrhea,

gastritis, vomiting, etc., e.g., green fruits, cold drinks, excessive drinking, and the like; 4) a miscellaneous group for which no apparent rationale is evident, e.g., avoidance of radishes, cucumbers, etc.

Concern over the necessity of avoiding certain fruits, vegetables, and seafood was very generally prevalent. To cite a few quite pertinent articles pertaining to this:

"James Bailey, a Norfolk morocco dresser, after being warned of the pernicious effects of all fruits went home, ate a muskmelon, and was buried in 24 hours after."<sup>170</sup>

"Eating green corn!! and that in Cholera times. Paving stones have this advantage over 'green corn', that they will not swell nor turn sour in the stomach; and the person who should get the Cholera from using these last named edibles, would have so much on the side of prudence that medical men have not especially prohibited their use."<sup>170</sup>

"A sailor was seen reeling along the streets not long since with a pineapple in his hand. Someone asked him what he had. "Cholera Morbus", he replied. And so it proved. For in less than 24 hours he was a corpse."<sup>171</sup>

"A labouring man of very correct habits, bought four watermelons a few days since, on account of their unusual cheapness, and ate two of them. As might have been expected he was attacked by the Cholera and died."<sup>171</sup>

"Should the Cholera continue until the general crop of peaches ripen, we fear that many will not have control enough over their appetities to abstain entirely from them, whatever may be the consequence."<sup>172</sup>

From eating crabs, three deaths were reported in Harlem, two in Yorkville; from eating plumbs, one death reported; and from eating watermelon, an additional death<sup>173</sup>. A quotation from the Philadelphia Gazette goes so far as to state that peaches fed to a horse resulted in violent spasms and all the symptoms of the Cholera in the poor horse<sup>174</sup>; another report states that a hog in Baltimore died of Cholera from eating watermelon<sup>175</sup>.

In New York the fear was so real that the sale of green corn, green fruit, cucumbers, etc., was forbidden by law<sup>176</sup>. The Roman Catholic Bishops of New York and Philadelphia permitted their parishioners to eat meat at any time to replace the restricted green vegetables<sup>177</sup>.

How did the disease extend itself from man to man; from community to community; across a broad, unpopulated expanse such as the Atlantic Ocean? This would seem to be the crux of the problem -- that to be understood before any consistent preventive measures could be taken. Yet, this question was never settled, nor was there a consistent postulate with subsequent series of preventive measures taken. There were many suggestions and many ideas, but the preventive measures subscribed to were quite non-specific, actually, in large part, inconsistent with the action taken. It was as though one faction wrote on the cause and spread of the disease and another faction decided how to prevent its ingress. In reading the various theories proposed, it is well to keep in mind the various nuisance ordinances and suggested preventive measures advocated by the village, and to recall that the village and state had established, essentially, a cordon of defense against the infected.

Dr. Coleman submitted to the Board of Health, on July 12, his findings of the method of ingress of the Cholera into Montreal: (in abstract)

"Dr. Robinson, a physician..., kept a diary...showing the prevailing winds (and) he had observed a remarkable tendency in diseases to assume an anomalous character for months before



"the Cholera became general in Montreal. From the first of May until the middle of June, easterly winds prevailed much more than during the same time in any previous year... Bowels complaints were now more common than usual in these months. (in late April)..a case occurred in the practice of Dr. Robinson which exhibited...the symptoms of Asiatic Cholera...Two other equally well-marked cases fell under the notice of Dr. Robinson soon after. All these cases.....terminated fatally in less than 24 hours. Dr. Stevenson, Professor of Anatomy and Surgery in the University of Montreal, states that he saw three cases of the Asiatic variety before the 29th of April. Dr. Holmes...says that cases of the Cholera had occurred in the suburbs of Montreal before the arrival of a single emigrant. Dr. Nelson, Health Commissioner of Montreal, states...'Without a shadow of a doubt, the disease existed in Montreal before we had any intercourse with infected countries'...'several cases broke out in April; after which the disease disappeared, and again broke out in a mild form in June eight days before the arrival of the Voyageur) ...among natives who had little or no intercourse with the port'"<sup>178</sup>.

With a report such as this, it would seem more consistent to merely enjoin the usual good health measures and forget all else. The conclusion that the winds were responsible was rather generally prevalent:

"This disease is epidemic; it is atmospheric...Easterly winds blew constantly for forty days towards Quebec and consequently the tainted atmosphere of Europe arrived at our shores."<sup>179</sup>

"Every person in (Ontario and Quebec) was affected by the same premonitory symptoms...I may safely say, not one person escaped them...these sensations were general in persons who were twenty miles distant from the disease."<sup>179</sup>

"We must breathe the fresher and purer atmosphere or the winds will blow contagion and pestilence through our streets and into our dwellings."<sup>180</sup>

And there were proofs and quite detailed scientific theory:

"At Newcastle, England, a kite was sent into the air with a piece of meat, fresh haddock, and a small loaf of bread. It remained in the air 1½ hours. When it was brought to the ground, it was found that the fish and meat were in a putrid state and the loaf, under the microscope, was pervaded with legions of animalculae."<sup>181</sup>

Not quite along the lines of the tainted air theory expressed above was the rather detailed and long-winded theory propounded in a Genesee Farmer editorial; note a unique twist in the concept of there being an excess of carbonic acid gas:

"If we judge the cause of this disease by its effects, we should (include) that our atmosphere contained, at this time, too great a proportion of carbonic acid gas, and consequently there was a want...of oxygen, or vital air, sufficient and necessary to support animal life...no one has arrived at that degree of perfection, that has enabled him, to detect any material variation in the proportion of the constituents of it; but that there is an alteration sufficient to engender disease, all will readily prove.

"Now, the changes in the animal feelings, (pressure) at the stomach and lungs, vertigo and head pains), and the color and consistence of the blood, are the same in the present disease, that would take place were the patient made to breathe, an artificial atmosphere, in which there was too (much) carbonic acid gas.

"...leaves, which during the daytime, have the property of decomposing (the carbonic acid gas) and retaining the carbon and sending off the oxygen; during the night...give off some of the carbonic acid gas, as light is supposed to be necessary to decompose it. So far, this theory would agree with the advice of physicians, 'to avoid the night air', as it contains more carbonic acid than during the day.

"A suitable proportion of animals and vegetables, act upon the atmosphere, for the mutual benefit of each other; animals inhaling the atmosphere, retaining the oxygen, and giving off oxygen...If there is any country in which this necessary equilibrium has been destroyed, by an over-population and want of vegetation, it is Asia.

"Men who were particular in their meteorological observations, all agree that during a period previous to the appearance of Cholera, there was a prevalence of East wind, for an unusual length of time;...if so, then we may hope that as vegetation resumes its activity, after midsummer, when it seems to suffer a certain syncope, then the healthy equilibrium of our present atmosphere may be restored; which, should it take place, would justify the position we have taken.

"Under these circumstances would not an attempt to form an artificial atmosphere for a patient laboring under Cholera, in which there was an extra quantity of oxygen, be advisable; or might it not have a salutary effect, to allow them to breathe, for a short time, pure oxygen?"<sup>182</sup> (in abstract)

Without blinking an eyelash, the Genesee Farmer, just seven days and one issue later, explained Rochester's epidemic in terms of the wind, stating that accurate meteorological tables had been kept for three years and in 1832, "The wind, during the month (of August), has been more uniformly from western direction, than has been noticed during a period of three years observation."<sup>183</sup>

A less prevalent idea was that there existed some change in the nature of the light in the sky, the clouds, and various other natural phenomena which were unique to the year 1832. How many subscribed to this idea cannot be ascertained, but it is probable that there were not many. The article as abstracted was printed both by the Rochester Gem and the Genesee Farmer who had pilfered it from the Commercial Advertiser (N.Y.), who, in turn, had copied it from the Courier and Express (N.Y.). The idea received broad circulation, if nothing else.

- "1. Nature, properties, and color of the LIGHT have been remarkable and unusual, ever since Whitsun Sabbath, June 25. Since then, (the light) has...lost in color and vividness, and suffered a gradual fading so that all distant objects appear more distant and less distinct.
- "2. In the same period of time I have observed a very permanent and persisting mist to the east, covering at least  $\frac{1}{2}$  of the sky, and lying under the brightest sunshine like a thin white drift.
- "3. The clouds which are floating over us, rarely and but transiently, assume the rounded and cumulate form. They do not invite that principle of heat and rarefaction which under our June and July suns used to display them in fantastic and capricious union and expansion...Now and for weeks past the air cannot brace them; the edges grew ragged and divergent, they are carried along by the wind and stratify in masses.

- "4. There never was a season with fewer thunderstorms; and there have been no summer-evening electric flashes. What rains we have had, have come after a low rumbling of thunder, as if the skies were all one sponge of loosened vapor.
- "5. The hue of the sky...has been latterly uniformly pale... there is a silvery opacity."

"The change in the appearance of the heavens cannot be denied...The properties of the light have thus deteriorated for the last six weeks.

"The sun has been 'shorn of his beams' and we have been living, as it were, in the first steps of the shadow of an eclipse.

"I cannot imagine a spectacle more solemnly sublime than ...this extensive and half-deserted city...under the awe and solicitude of impending danger which fills the mind, and impresses the air of the remaining inhabitants. The vast lines of edifices, under the pallor of the crepuscular sunshine...the skies and the air blanched in luster, the streets whitened, and comparatively lonely, and the sentiment of vacuity and vastness increased not alone by the desertion of places of resort, but mainly by that dim, feeble, and imperfect radiance effused over the earth..We are...deprived of our due stimulus of light, our organs waste and suffer, while those who are the least able to resist this decay of their vital powers become the prey..."  
184,185

A letter from "Ulmus" in Buffalo, dated August 14, confirms these imaginative suspicions. He agrees with the statements made about the haze, etc., and continues:

"A pale dreamy light like the sun half-eclipsed has constituted our day, and a sluggish, sombre, shadow has thrown a melancholy look upon our sunsets; for a brilliant one I have not seen this summer..."

"Brute animals have in frequent instances within a few weeks past, been discovered with some of the appearances which occur in the prevailing Cholera...Animals have been found... when killed to discharge little or no blood, and when opened, the blood was settled in black and coagulated masses near the heart, and the region of the stomach filled with its watery parts and other secretions of the system. Is it not 'an influence unseen that creeps abroad and poisons the air'."186

However, there was the odd skeptic who couldn't quite accept the theories of the peculiar light, and stated so in rather vitriolic terms:

"It is not necessary to imagine...that the light should lose its properties because some hypochondriac imagines himself 'etiolated plant'. I have taken a prison and ascertained that the (red and yellow) rays are as brilliant as...usual and occupy the same space in the spectrum. The atmosphere during the latter part of June and to the (middle) of this month was remarkably clear...I have not yet communicated with the animal or insect tribes and therefore do not know whether the usual fire and vivacity of the former or the animation of the latter have undergone...extraordinary changes.

"Supposing it to be true that,...the absence (of yellow in the sunshine) is the cause of the Cholera, with just as much probability, might it be supposed that the pyramids of Egypt were built by pygmies...or that a cloudless summer's day was the certain forerunner of an earthquake?"<sup>187</sup>

Virtually all that was recorded and published considered atmospheric changes, noxious effluvia, and a variety of what - not along this line. Paradoxically, though considerable measure was taken to prevent the ingress of infected contacts, it was a rare man who contended that the disease was actually spread in this manner. Such a theory, written by a European, J.B. Kerk, M.D., did filter into the Rochester papers -- a singular instance:

"The effluvia from the excretions of an individual having Diarrhoea Cholericæ, may communicate to another predisposed person the most developed form of the disease...When we consider how long we will travel with the Diarrhoea Cholericæ.. the gradual march of the dreadful malady is at once accounted for."<sup>188</sup>

Needless to say, there were a few who were themselves somewhat baffled by the diverse barrage of treatments, theories, etc. Such a person was "Alonzo", who, in a letter to the editor, said (in abstract):

- "1. When I see Physicians disputing about a disease which is as well marked as Malignant Cholera, some calling it Cholera and others something else, I think some of them must be ignorant or dishonest.
- "2. When I hear all the Physicians saying the Cholera is not contagious; and all the people saying it is contagious, and acting accordingly, I think it's time to ruin the character of the profession or lower the... knowledge of the people.
- "3. When Physicians become cool, calm and collected and reason about the treatment, I think the mortality will be less."<sup>189</sup>

But to return to the epidemic itself, as it moved closer with ever greater menace. On June 26, it was reported in Port Hope<sup>190</sup>, and in Brockville<sup>191</sup>; in New York City on June 27<sup>192</sup>; and on the same date in Erie, Pa.<sup>193</sup>, where it had been carried by emigrants on shipboard; on June 28, Brantford<sup>194</sup> and Ogdensburgh<sup>195</sup>; July 2, Ganonoque reported cases; Albany on July 3<sup>196</sup>; Gibbonsville, July 5<sup>197</sup>; Greenbush and Detroit, July 7<sup>198</sup>; Seneca Falls, July 8<sup>199</sup>; Buffalo, July 10<sup>200</sup>. The epidemic was apparently not contained by any preventive measures, and it soon became evident that for other than geographic reasons, the people had cause for apprehension.

A report from Montreal states: "We wish we could say that none but the worthless in our community had fallen victims..but many families of respectable standing have to mourn the loss of (relatives) whose lives and habits were most regular and temperate."<sup>201</sup> Another report states

that two-thirds of the medical men had been attacked<sup>202</sup>; and a note from Plattsburgh<sup>203</sup> and one from Albany<sup>204</sup> quote the same figure in these regions.

A quotation from a Montreal paper in the Daily Advertiser states:

"Great numbers have left town to fly from a disease which has now spread itself almost over the whole surface of the earth. (To fly) is as hopeless as to attempt to fly from the presence of the Divine Being."<sup>205</sup>

From the Montreal Courant:

"The mortality of Cholera in Montreal is nine times greater than in Paris and sixteen times greater than in London. The continent of North America will be struck with amazement at this awful destruction of human life."<sup>206</sup>

From Montreal:

"The panic is over in great degree; one does not meet with dead bodies by dozens in all directions."<sup>207</sup>

From New York:

"Our city is rapidly emptying of its inhabitants, and every day we seem to see a less and less number about the streets ...1/3 to 1/2 of our population is missing."<sup>208</sup>

From Kingston:

"All communications by water...have been cut off, and a British armed vessel is anchored off the harbor with orders to stop every craft."<sup>209</sup>

Any sudden deaths were investigated with extreme care, as fear grew among the populace:

"A boarder at a hotel in Albany intentionally committed suicide by taking laudanum. He left a scrap of paper signed by himself as follows: 'not the Cholera!'"<sup>210</sup>

"The sudden death of a man at Troy was investigated at autopsy by ten physicians who testified that he died of cayenne pepper vegetable powder poisoning -- a victim of quackery."<sup>210</sup>

The Board of Health sought constantly to reassure the villagers with daily newspaper reports stating, "the present state of health in this village has at no former period at this season of the year been more perfect."<sup>211</sup> But all was not peaceful:

"The Board would respectfully warn their fellow citizens against the exaggerated and in many instances malicious reports put in circulation by evil disposed or excited persons as to cases of Cholera here, or as to the landing of infected persons on our lake shore."<sup>212</sup>

"The avidity with which news is sought by all classes during the present panic, renders the accelerated speed of the mails peculiarly acceptable."<sup>213</sup>

"The prevalent alarm excludes from the State...a considerable portion of the travelers...while a pestilential torrent is deluging the land with apprehension and woe."<sup>214</sup>

"The excitement and alarm, particularly in the surrounding country is...altogether premature and unnecessary."<sup>213</sup>

And, almost anti-climatically, came the announcement without fanfare or headlines, on July 12:

"W.W. Reid, Drs. Graham and Miller visited the canal boat, Tennessee and found on board a colored man recovering from an attack of Cholera Morbus.....There was no cause for alarm."<sup>216</sup>

The single case of the Cholera was not further discussed in the issue. The man had not left the canal boat, he had not circulated in the town. The populace waited and wondered, though not for long. The Board of Health reported on the following day:

"Gentlemen:

I have just been called to see a traveler by the name of Edward Pearsall, at the house of Mr. Polly, St. Paul Street, said to have the Cholera. It is even so...He is a peddler from Michigan -- went to New York to buy goods -- left there on the fifth inst. -- on the sixth was in Albany --



"on the eighth inst. was seized with diarrhea, had nausea occasionally -- on the eleventh arrived in this village -- on the twelfth (this morning) took a light breakfast.-- soon after which he went to the office of A.B. Luce, Botanic Physician, said he had dysentery, and wished a dose of medicine; a cathartic was given -- at 10 o'clock A.M. was seized with violent purging, vomiting and spasms of the extremities. He came on the canal boat Havre, Traders Line. Drs. Coleman, Elwood, Backus, Smith and others have also seen the case and all agree that it is Malignant Cholera.

W.W. Reid, Health Officer."217

Within a day he was dead, but the Board, seeking constantly to avoid a panic, reassured the people that the man had been a boatman on the Genesee and a known "hard drinker"<sup>218</sup>.

However, the Botanick Physician, referred to in what he felt to be derogatory terms, replied in the person of a letter from "T. Hamilton" to the Antimasonic Inquirer, presenting a somewhat different slant: (in abstract)

"Israel Pearsoll came to the office of Dr. Luce and requested me to give him a portion of physick. Later, hearing that he was severely indisposed, I called to see him and treated him such that his puking, pain and spasms stopped. Dr. Luce and Dr. Warren came to assist. Soon the patient was subjected to repeated examinations by different physicians, one after another until he became considerably fatigued by such frequent interruptions. But the worst of all...is that Dr. Reid...entered the room in the absence of Dr. Luce and Warren, not in that complacent way which characterizes every gentlemen, but more like the ignorant pretender...and claimed the right to remove the man where he pleased, or prescribe for him as he thought proper! He then against the remonstrances of (all)...dealt out his medicine which...he acknowledged to be a tablespoon of paregoric and 20 grains of calomel.

"After Dr. Luce returned, he told Dr. Reid he was afraid the calomel would kill the man if he could not get it away. Dr. Reid replied, 'he guessed it would and pumpt it out of him if you can'. He then left the man to come to the very end...We shall soon see the little weak and flexible Reid...dashed headlong to the ground and in its place shall rise the tree of liberty...whose leaves and virtues shall heal the world."<sup>219</sup>

Mr. T. Hamilton was fighting a losing battle against a popular Dr. Reid, for the following issue of the Inquirer stated:

"We have offended a large portion of the community by publishing the letter of T. Hamilton. We did not sanction the statements. We apologize for having contributed to impair the confidence of their vigilant Health Officer. A more honest and competent professional man (we are assured by a friend who is well acquainted with him) cannot be found."<sup>220</sup>

Not until September 25 was more on the first death divulged, but this was truly a vivid, sensitive account, granting to us one of the few very personal insights recorded during the epidemic. The writer signs his name only as "A", but it may be presumed from the records that this was Ashbel Riley<sup>221</sup>, at this time serving on the Board of Health, as Assistant Health Officer and as a member of the Hospital Committee:

"Israel Pearsoll, just returned from New York, was on July 12, 1832, at 10:00 A.M., walking about the streets, when, in a sudden he was attacked with that fell destroyer, the Cholera. It was about 6:00 in the evening, when I first saw him -- he was in that dreaded stage of the disease called the collapse, with his skin blue, hands shriveled, eyes sunk and glaring, extremities cold and deathly as the grave itself; he continued in this situation growing, however, colder and colder, until the icy hand of death was fully laid upon him. This was about 10:00 at night -- numbers flocked to see, what one would be likely to think, by their actions, was something more than a dead man; but few continued, to...lay him in his coffin. Then all forsook him but three and his landlord, who were the only ones to convey him to the grave, one of whom went in quest of the grave digger. At about eleven, he was found, troubled in mind, and all alive on the subject of Cholera. The question was put, "Will you dig a grave?"

"Yes", he replied, with trembling words, "I will dig the grave but will not fill it.

"Very well...have it ready by two o'clock."

"At 2:00 it was found we had not help enough to...convey the corps to the grave...for remember...the corpse before us must be consigned to the grave before morning, for the benefit of the living.

"But it was soon decided that one should get a team, and call up a man who...would assist; he came with willing step. "My mind instinctively thought on what I was doing -- conveying to the grave the first one who had fallen in a village of 12,000. And when I reflected, too, that if the disease was contagious, I was now doing what some other might have to do for me before another night was gone, I must acknowledge it filled the mind with thoughts solemn as eternity... With these thoughts we proceeded to the grave, which we found dug, but no one to assist in the ceremony of burial, which we performed in silence, and each returned to his home to reflect on who should be the next to die with the Cholera."<sup>22</sup>

From July 12 to July 15, there were four reported cases and two deaths. In addition, numerous had the "ordinary Cholera Morbus", which cases were not classified then, or throughout the epidemic, as the so-called Malignant Cholera<sup>223,224,225</sup>. The Board of Health in mid-September in a summary of the Rochester epidemic states:

"A very great proportion of our citizens have been afflicted with diarrhoea and other symptoms usually denominated premonitory. At several medical offices, from five to thirty different individuals were daily prescribed for, for more than a month."<sup>226</sup>

If, in addition to this gross approximation, the number of those who frequented the so-called quacks, Botanick doctors and the like be added, it is likely that a number several times that ordinarily quoted suffered to a greater or lesser degree.

From July 16 to July 23, there were no reported cases of the true Malignant Cholera, and the Board of Health cautiously began

to reiterate that the city was at no time healthier. All had concluded that the disease they had seen was Cholera Morbus, but could it leave the city with only two deaths and four cases?

Meanwhile, Plainfield<sup>227</sup> and Newark, New Jersey<sup>228</sup>, reported cases on the 11th and 12th, respectively; Liverpool on the 13th<sup>229</sup>, Philadelphia on the 16th<sup>230</sup>, Syracuse on the 17th<sup>231</sup>, Troy on the 19th and Lockport on the 21st<sup>232</sup>.

But, on July 23, two more cases and two more deaths were recorded, and on the following day, yet two more cases<sup>233,234</sup>, and it soon became evident that Rochester was not to be lightly spared.

On July 26 a notable breach of the quarantine regulation and defensive cordon along the canal was committed, which exhibited, at the same time, a rather exceptional humanitarian gesture on the part of the health authorities:

"The Western Barge left Albany on the 20th with 56 passengers, English, Irish, Swiss emigrants. 'From the situation the boat was in when she arrived in this village, she must have been extremely foul and unhealthy when she left Albany.' Eight miles east of Utica, the Captain died of Cholera. At Perinton, a woman died and was buried there. 'The passengers tried to land their baggage for the last 80 miles of their passage, but were always prevented by the inhabitants.' Arrived in Pittsford on the 26th -- here another passenger died and was buried and three other persons were found to be sick. The three were taken off the boat and provided for -- two of them died before morning. The boat with the remaining passengers then was taken to the west part of the village<sup>235</sup>, where the passengers were taken from the boat. Three of them sickened and one died. The sick were put in the hospital. The boat has been drawn out of the canal and cleansed. Had the poor unfortunate passengers been refused a landing here, and had been compelled to continue on to Buffalo, very many of them must have perished by the way. 'The Board has been informed that there are some persons in New York and Albany. connected with the transportation business. on the Hudson and on the Erie Canal, who have undertaken to send to Buffalo several thousand foreign emigrants and many

"of them are now actually on the canal. This conduct cannot be too severely censured."<sup>236</sup>

What influence this ingress of the Cholera-carrying travelers had on the Rochester epidemic, can only be speculated on. However, it is a rather interesting coincidence that the epidemic became markedly widespread in Rochester, comparatively, immediately after the landing of these people. (See chart following page .) That there were many who took an extremely negative view of this act cannot be doubted, for the Board of Health, within a week, passed the following restrictive measures which were very specifically aimed at one thing -- the prevention of a similar occurrence:

- "1. No canal boat or river boat shall be permitted to be laid up or remain within the village of Rochester for a longer space of time than 24 hours unless examined and inspected by Dr. Wm. Reid, Health Officer, or A. Riley, assistant to said officer.
- "2. If found to be infected so as to endanger the health of any person, he shall direct said boat forthwith removed to some place without the bounds of the village, there to remain until thoroughly disinfected. In case the person having charge of such boat shall neglect or refuse to remove such boat when so ordered, the Health Officer or his assistant shall immediately cause the same to be removed."<sup>237</sup>

"The Health Commissioner is directed to examine at the extreme line of the village all canal boats having emigrants or sick persons on board: and that he take the necessary steps to prevent their landing, or in any way coming in contact with our citizens."<sup>238</sup>

Not long after, Assistant Health Officers were appointed whose duties were "to see that the boats lying at the (various basins and docks) and the basins themselves are kept clean, purified and free

from infection"; again reflecting the financial restrictions of the Board, the boat owners were to provide the quick lime necessary<sup>239</sup>.

The Health Commissioner until the 28th of July was a Mr. Haywood, but at this date a new Commissioner was appointed in the person of the 37 year old Ashbel Riley. That this appointment came but two days after the breach of quarantine by the Western Barge is worthy of note, though records of the time make no statement of explanation for the switch. Ashbel Riley, though not a medical man, was subsequently lauded everywhere as the hero of the epidemic<sup>240-243</sup>. Vocationally, he was a contractor and builder<sup>244</sup>, a real estate agent<sup>245</sup>, land owner and speculator<sup>246</sup>, village coroner<sup>245</sup>, and Colonel of the 18th Regiment of Rifles in the New York State Militia<sup>247</sup>. Of Riley one historian says, he was "very active, somewhat ultra in religious and reform movements, ready to spend time, money and strength for any cause"<sup>248</sup>. The consequently eminent Dr. Edward Mott Moore, aged 19 at the time of the epidemic, later stated, "He was the bravest man Rochester ever knew."<sup>249</sup> It was Riley who attended the first case and during the epidemic reputedly placed in coffins 80 of the 118 to die<sup>250-252</sup>. The picture we obtain is that of a dynamic personage, with almost excessive vitality; probably, the best possible if not the inevitably forced choice for Health Commissioner under the circumstances. Yet, surprisingly if the many stories be true, the only published tribute accorded him was printed in 1832 in the Rochester Republican, which merely expressed thanks to Colonel Riley and the Board of Health "for their exertions"<sup>253</sup>.

The villagers' reaction to the epidemic was, according to the Board of Health, quite objective and well-controlled:

"The sick in no case have...been abandoned or neglected. Strangers have not been driven from us. There has been no fleeing of families; no closing of stores and offices; no suspension of business...We have no citizens to return, to undergo the second seasoning."<sup>254</sup>

The report here quoted was probably a bit rosier than what actually occurred.

A reported 1,000 fled town (255,256) including an unashamed John O'Donoughe:

"Now that the Cholera has disappeared, the subscriber would most respectfully inform the community at large, that he has again returned home."<sup>257</sup>

And business was far from normal (the following from the editor of the Rochester Gem):

"TO MY SUBSCRIBERS

"In a time like this, when disease and death have spread a general gloom over all the place, and our local business is greatly stagnated, I must urge upon you the necessity of an immediate...payment."<sup>258</sup>

An announcement was made in the papers that no jurors would be called for the United States Circuit or District Courts<sup>259</sup>. For other businessmen, aside from the pharmacists, botanicks and patent medicine salesmen, there were a few business advantages created by the epidemic. The various bathing houses and "spring houses" were popular, perhaps for two reasons: 1) there were therapeutic advantages reported, and 2) the houses were outside the city. A report from the Avon Board of Health toward the end of the season indicates that the Avon Springs establishments, 15 miles from Rochester, received many of the 1,000 that reportedly fled the city<sup>260</sup>.

"During the past season, the public houses, at the village of West Avon and at the Springs, have been much thronged. A very large proportion of the visitors have been from infected districts. Many have been suffering from that state of the digestive organs which is said to be indicative of the approach of Cholera...I can say with confidence that all have been benefitted, and most of them permanently, by the use of the waters of our Mineral Springs...These waters are of the hydro-sulphureous class, and (resemble) those of Harrogate in England...It was the opinion of the celebrated English physician Dr. Armstrong, that sulphureous waters act powerfully on all of the secretory organs of the body... As alternative medicines he considers them as superior to Calomel, in the removal of chronic disease."

"We have, then, within the precincts of our town a preventive which may be used in all cases with perfect safety; and I freely hazard the opinion that after the use of the water for one week, no person could be attacked with Cholera."<sup>260</sup>

Secondary locations nearer Rochester received less popular support despite having all the supposed advantages of the famed sulphur water and despite frequent advertisements in the daily papers:

"Many of the inhabitants of our village are not aware that we have within four miles a mineral spring like those of Avon and pronounced equally efficacious by our most respectable physicians..Mr. Cleveland runs a coach to and from the spring twice each day at the moderate charge of three shillings for a passage out and back."<sup>261</sup>

"Would it not be advisable, when by the progress of disease business is partially suspended, instead of walking our streets, over-heated by the direct and reflected rays of the sun, congregating in groups, and adding to their fears by constant conversation about the Cholera, for people to resort to such places as the (Monroe Spring House)?"<sup>262</sup>

Some enterprising merchant opened yet another in Rochester. It was termed the Rochester Sulphur Springs but does not allude to the use of sulphur in its baths:



"...the Bathing House, situated on the south side of Buffalo St., is now open. That Bathing has a tendency to promote and preserve health, there remains not a doubt; it cleanses the skin, and opens the pores and causes a free perspiration, which is essential to health -- it is recommended by the Board of Health at Edinburgh as a preventive of the Cholera."<sup>263</sup>

Not until the end of the epidemic did the Board of Health publicly state that all was not normal in business and social affairs:

"The prevalence of the Malignant Cholera in this village for the last six weeks, has...suspended the usual intercourse between citizens of the neighboring country and ourselves... The usual business of the place has consequently...suffered no inconsiderable derangement and injury."<sup>264</sup>

Psychologically, denial of abnormal business life, etc., was well conceived but fears of the populace were difficult to alleviate in light of all that had previously been printed relevant to the mortality of the Cholera elsewhere.

The Board was able to establish a hospital by at least July 17, though the first death was not reported there until July 26<sup>265</sup>. Rochester's first hospital was located on Brown Street on the banks of the Erie Canal in a converted cooper's shop<sup>266,267</sup>. It was staffed by three or four nurses and superintended by a Constable Seth Simmons<sup>268</sup>. Not entirely adequate physically, it is recorded that the hospital was "often filled to overflowing, the dead and the dying lying upon the straw pallets and on the ground"<sup>269</sup>. The villagers were a bit apprehensive about going to the hospital, regarding removal to the hospital as the first part of an inevitable route to the grave. One young female teacher had a card affixed to her belt stating, "If Miss L-- should be taken with the Cholera in the street, don't take her to the hospital but to her boarding house."<sup>270</sup>

In addition to the hospital, the Board sought certain empty houses in which to house the poor whom they felt had been exposed to the disease. The temper of the village is nowhere better demonstrated than in their reaction to the erection of these houses, and to the established hospital:

"In the prosecution of their labors, the Board have found it necessary to have at command some empty houses into which they could remove poor families who were unable to provide homes for themselves, and who in health themselves were in exposed and unhealthy situations. They also found it almost impossible to procure houses for that purpose in the village, as there are but few empty tenements, and such as were empty the owners were unwilling to let to such families. The Board therefore agreed with Col. Riley, to put up three small houses on his own land, on the west bank of the River, near the south bound of the village, which they were to have the use of for that purpose. These houses were not in any way to be used as hospitals for the sick, but as dwellings for the poor who were in health. This was fully made known to all persons in that part of the town, whoever made any inquiry as to the objects for which these buildings were being erected. The houses were about completed and would this day have been occupied..; but a mob assembled last night and tore down and wholly prostrated the said buildings ...the said mob was composed of citizens of this village. "Complaints have been made in relation to the present hospital. The Board cannot for a moment believe that the health of any persons is endangered by residence therapy...the Board, however, anxious to relieve the fears of all persons are now endeavoring to procure some other place...but until some other place is provided, they must retain the one now in use; it is kept guarded, and any injury done to the building will be punished with the utmost severity."<sup>271</sup>

The idea of removing those exposed to the disease arose "not from fear of contagion, but lest some local cause might exist which contributed to produce the disease." This idea was of recent derivation and was suggested by Dr. C. B. Coventry, a Professor of Obstetrics at Geneva Medical College<sup>272</sup>.

The numerous victims of the Cholera were buried in both the cemeteries, i.e., on Buffalo Road (present site of the General Hospital) and on Monroe Avenue<sup>273</sup>. There were few who would have anything to do with the Cholera dead. A Mrs. King recalled:

"The second death was a woman on our street. No one was willing to lay her out. Mrs. Fred Starr, my mother and I dressed ...her. I think this was the last person in the epidemic so buried."<sup>274</sup>

This, probably, was the reason for Colonel Riley being forced to "coffin" the reported 80 victims, for none would handle the bodies until they had been safely sealed in their coffins. A certain eerie element prevailed over the city, for morning after morning the "dead cart" passed at daybreak laden with the remains of those that had died at night<sup>275</sup>. Gravediggers were not easily obtained, whether because of fear or labor shortage. William Hanford recalled:

"During Cholera times we could hear them working in that old burying-ground at all times of night, and the graves were not very deep."<sup>276</sup>

A no doubt apocryphal story in one history states that thirty were buried together in a ditch in the Buffalo Road cemetery<sup>277</sup>.

The epidemic gradually increased in severity with increasingly more cases and more deaths recorded, until on the 15th of August, it reached its climax with a reported 11 deaths and 26 cases for that day alone. From Historical files, only two Rochester letters are preserved from the time of the epidemic, although these were both written, significantly, at the peak of the epidemic. The first, of August 16, was written by William Pitkin, pharmacist, to Dr. Morgan of Hartford, Conn.:

"...our Village is suffering severely under the dreadful visitation that has covered our whole country...The Cholera on its first appearance here made temperate persons of debilitated habits its first Victims, and until within a week those of intemperate and dissipated habits entirely escaped, but within the last three days numbers of that class have been hurried into eternity with but six or eight hours illness. The Blacks that are attack'd I believe all die:... in a house in the rear of my store a Blk Woman and child were attacked about nine o'clock last night, both died before daylight and a woman who attended them and assisted in placing them in their coffins was herself buried four hours after them; with such fearful rapidity are the victims of Cholera hurried to the bar of God...We have yesterday and today a great increase of cases and deaths, among the deaths today is Col. Darrow who formerly lived in Hartford."<sup>278</sup>

The second letter, dated August 19, was published in a Canadian paper and subsequently quoted in the Daily Advertiser. The writer is not identified: (From Rochester)

"...the pestilence that walketh in darkness and destroyeth at noonday, is all around me. Many of my neighbors and friends are dead and God only knows when it may enter my own dwelling. We have been sorely afflicted here and not the half has been told (as to the mortality of the disease), by our Board of Health. We have had from two to six die out of one family; and we can no longer conceal the fact, that it is contagious. Nearly all the cases (contrary to public opinion) of deaths, have been of women, children and men of correct and steady habits."<sup>279</sup>

In the midst of the epidemic with all its attendant fears, some unrecorded individual doubted that there was really any serious problem, or at least any more serious than any other year:

"We presume it is not generally known that our village is on the whole quite as healthy as it usually is at this season of the year.

	<u>Deaths 1831</u>	<u>Deaths 1832</u>
"July	43	34
July 7 to August 7	47	46
July 12 to August 7	40	45
Greatest mortality one day	7	5,280,281

The old adage that one can prove anything with figures was certainly true in this case. The first Cholera death was not reported until July 13, and until July 23, only two deaths due to Cholera were noted. Willis Kempshall, a well-known businessman<sup>282</sup> and community booster, drafted a counter-reply in short order:

"I know not the object proposed to be gained by the statement; but I am satisfied that it is calculated to produce an impression abroad, highly injurious to the reputation of this village. A stranger unacquainted with the facts would infer that although the Cholera has prevailed, and is prevailing among us to an alarming degree; occasioning a mortality in proportion to the number of inhabitants, equal to that which prevails in the City of New York; yet after all there has scarcely been the usual number of deaths for the season...the writer of the article ought to have stated that during the months of July and August 1831, there was a very unusual mortality...owing to the prevalence of an epidemic disease amongst children."<sup>283</sup>

Of the many deaths, two only were given any great amount of publicity, for even obituaries were rarely printed at this time. The circumstances in the deaths of Naomi Tucker and Charles Henry Tucker, the wife and infant son of Luther Tucker, the editor of the Rochester Daily Advertiser, were reported in rather rich detail: (this is the Genesee Farmer)

"The boy...was attacked about sunset by Cholera. Anxiety for his safety, led to greater exertions than the feeble frame of his mother could sustain; and she sunk so rapidly before the Destroyer, that the grave enclosed her before the next night! --Meantime the interesting youth partially recovered -- Cholera was succeeded by fever. The hopes entertained of his recovery at this time were blighted by a relapse into Cholera, which swept him to the tomb of his beloved mother."<sup>284</sup>

In the Daily Advertiser, little more than an obituary was included:

"Died, August 4, Naomi Tucker...attacked with Cholera at 2:00 A.M., and died in 12 hours. She was in her 25th year."<sup>285</sup>

"Died in this village on Thursday morning the 9th inst. of the Cholera, Charles Henry, only son of Luther Tucker, aged three years and eight months."<sup>286</sup>

Succeeding this last obituary was a poem, written anonymously, describing the boy as <sup>he</sup>cried for water, while dying of the Cholera.

It is not difficult to conceive of the qualms of conscience and fear that must have subsequently overwhelmed Luther Tucker upon reading the account quoted below from the London Globe. Printed by Tucker in his Advertiser it was prefaced by his comment that the derived source was "above suspicion" and the rhetorical question, "How many such cases may have happened during the progress of the Cholera in America and Europe?"

"A poor woman and her son were violently attacked with Cholera which in the case of the latter very soon terminated, as it was supposed, fatally; and after having lain apparently lifeless for a few hours, the body was buried. The woman shortly after got worse and became insensible and motionless; having been kept as long as was considered safe, she was put in a coffin to be buried; but just as the undertakers were about to screw it down she revived, pushed off the lid and very soon recovered. Having anxiously inquired about her son she was informed that he had been buried for several hours, which made her very uneasy, and she insisted on his being exhumed...The horror of the spectators can scarcely be imagined when on opening the coffin it was found the child had turned round, and tore its face almost to pieces with agony, having, it must be supposed, come to life in this dreadful situation."<sup>287</sup>

The temperance societies, very active previous to the epidemic, evidently continued their work throughout epidemic times, though only passing reference is made to them:

"The handbills which are everywhere posted about the city,  
we know not be whom, give sound advice --

LEAVE OFF

DRAM DRINKING

If you would not have the  
CHOLERA."<sup>288</sup>

Similar notes were repeatedly published in the daily paper<sup>289</sup>. The

Rochester Gem observes:

"Grog goes a-begging to an extent which we never witnessed before, and would be in still worse repute, but for the pernicious doctrine of a few physicians that a little is a very good safeguard against the disease."<sup>288</sup>

However, it was not long after the death of Luther Tucker's wife and son that the Daily Advertiser published a strongly worded editorial denying that the Cholera victims were the drunkards and dissolute:

"The common opinion that the Cholera is a disease peculiar to the dissolute and intemperate proves to be incorrect so far as Rochester is concerned...We have no objection to the friends of Temperance using all warrantable means to drive the drunkard from his cups -- and we have no doubt that the use of ardent spirits predisposes to disease of all kinds; but in Rochester, persons of broken or feeble constitutions and dyspeptic habits have been prominent subjects for attacks of the Cholera. At all events, the prevalent opinion that most of those who die with Cholera are filthy, dissolute and intemperate, is erroneous and should be corrected so far as Rochester is concerned."<sup>290</sup>

The contest between the "quacks" and the physicians continued unabated throughout the epidemic. Of the total deaths, variously indicated as 108 and 116<sup>291,292</sup>, 27 were treated by Empryrics<sup>291</sup>. If we are to assume that medical therapy was little more than palliative (which, as pointed out, was the case), the reason for the Empryrics large trade was probably in part lack of confidence in the physician:

"Every pamphlet I have seen convinces me that the Doctors know not the cause nor the cure of this sad disease."<sup>293</sup>

"I believe that there is a want of confidence among the people, in Physicians: and a want of confidence among Physicians in each other and themselves."<sup>294</sup>

The situation as seen by the physicians, is best described in an editorial written by the Albany Medical Staff and published through the auspices of the Rochester Board of Health, who stated that they found it equally applicable:

"The poor are more in the habit of tampering with medicines, and are more easily imposed upon by the pretensions of empirics, and dealers in antidotes, specifics, and preventives...We are aware that a portion of the community will attribute our remarks to other motives than those which influence us...If, in the forming stage of the disease, recourse be had to stimulants, such as brandy, spirits, and other heating remedies, the looseness may be checked and temporary (forming stage: weariness, anorexia, sickness at stomach and looseness of the bowels)...Where Cholera had proved most fatal, the individuals had been stimulating themselves with heating drugs, furnished by empirics as preventives of the disease...They stimulate a system already under an inflammatory disease...and by giving false confidence, they prevent the use of timely aid from persons qualified to prescribe appropriate remedies.

"The contest between the empiric and the regular practitioner is unequal. The former has no character to lose and is subject to no control, whilst the latter has to conform to the laws and usages of his profession. When the empirics' preventives fail to keep off the Cholera, he is generally abandoned by the dupe of his artifice, and the regular physician employed. If the case prove fatal the patient is said to have been 'killed by the regular doctor' -- whilst on the other hand, the empiric is permitted to supercede the regular practitioner, if the case prove fatal, it does so 'because the empiric was not called in soon enough'...If the ignorant persist in taking nostrums as curative or preventive means...justice to the sick...demands that the Board of Health should pass such regulations as would expose to adequate punishment, empirics or their friends, for interfering with the prescriptions of attending physicians, unless the latter are duly apprized that their attendance is no longer desired."<sup>295</sup>



The Board of Health was careful to point out at the close of the epidemic that "the ignorant, and those who, disregarding the admonitions and precautions...confided in empirical preventives, have felt the epidemic very severely".<sup>291</sup>

How thoroughly the many preventive measures recommended by the various sources were carried out, we do not know, although judging from the many cited ordinances, certainly something must have been done.

Dr. William Reid, Health Officer of Rochester, by position an important figure, disagreed vehemently with the use of the various chlorides of lime, so popularly acclaimed. His personal opinions were not made public in the newspapers until September 1, near the close of the epidemic. Doubtlessly, however, the program in Rochester strongly emphasizing the use of the chlorides was in no way abetted by a negatively inclined Dr. Reid. His opposition is unqualified and blunt. It must be noted, however, that Dr. Reid was adjudged to have "an acute mind but his hasty conclusions were feared as being too rapid for safe judgement"<sup>296</sup>.

"Chlorine in some form...for many years...has been highly extolled as possessing great, if not unlimited disinfecting powers. Men of reputation and science have asserted that its...use is no longer empirical but scientific. If by 'disinfecting agent' they mean one capable of neutralizing...odor, I coincide in opinion...if a neutralizer or destroyer of contagion be meant, I utterly deny that there is any certainty or even any probability, that it possesses any such power.

"That chlorine destroys offensive odors is freely admitted. But offensive odors are not always injurious to health... On the other hand chlorine itself, unless largely diluted by the atmosphere, is highly injurious, as also is its compound, muriatic acid.

"Medical writers have divided contagion into two varieties -- viz. I. that which consists of a palpable matter or Virus, or that of smallpox and itch; II. that which consists of an imperceptible effluvium, as that of measles and whooping cough. But what it is that constitutes palpable virus, in the one case, or the imperceptible effluvium in the other, is wholly unknown. To rely, then, in any degree upon the... use of chlorine or any other disinfecting agent to counteract or destroy these unknown causes, is altogether empirical. Ever since 1750 the mineral acids, as they have been called, have been employed to destroy infection and contagion. Yet ...Infection, Contagion, and Pestilence stalk through the earth uncontrolled and unsubdued. The truth is that the apparent success sometimes attending fumigation arises from the fact, that the inhabitants are usually removed from the buildings during the process, which occupies some two or three days, and after it is completed, everything is thoroughly cleansed and the rooms freely ventilated. If as much pains were taken to maintain cleanliness and ventilation before fumigating as necessity compels to be observed afterwards we would have heard less noise and dispute about disinfecting agents. I have no confidence in any others than soft water, good soap and sand freely applied, and free ventilation. To substitute one stench for another...can add little to our security. I desire no better atmosphere than the old and tried one, composed of 20% oxygen and 80% nitrogen. "It may be asked, if the above statements and inferences be correct, why have they not been communicated to the public before, that the expense attending so liberal a use of Chloride of Lime, might have been saved? I answer: my individual opinion would have stood opposed alone to a popular tide, also to recommendations and opinions of several scientific and eminent men and consequently I should only have been thought singular and disregarded. The community, I presume, is, by this time, pretty well convinced, that neither quarantine, chlorine, quack plasters, nor quack preventives can control or withstand Cholera...In the meantime no very great injury has been done.

"W.W.Reid -- Health Officer."297

For the individual household to have followed every recommended procedure, a virtually compulsive personality would have been required. There were a few who followed the many recommendations though at the expense of some ridicule:

"Precautionary measures are not infrequently carried to a laughable extreme. Before breakfast, we encountered a dandy who had his umbrella spread to guard his precious personage from the morning sun when it was cold enough for common people to muffle in cloak or great coat."<sup>298</sup>

A sidelight to the epidemic itself was the literary offerings relating to the Cholera which were published at some considerable length in all of the Rochester papers. Numerous poems, essays, literary letters, and the like were written, none of which seem to have been recorded in the usual history of American literature. A few of the more choice offerings I have chosen to include:

From the Anti-Masonic Inquirer --

"Cholera Poem

"The wind, the wind -- it comes from the seas  
 With a wailing sound it passed;  
 'Tis soft and mild as the summer's breeze  
 And yet there is death on the blast.  
 "From the east to the west has the Cholera come,  
 He comes like a despot king;  
 He hath swept the earth with a conqueror's step  
 And the air with a spirit's wing.  
 "We shut him out with a girdle of ships  
 And a guarded quarantine;  
 What, Lo! now, which of your watchers slept?  
 The Cholera's past your line.  
 "There's a curse on the blessed sun and air  
 What will ye do for breath?  
 For, breath which was once but a word for life,  
 Is now but a word for death.  
 "Wo for affection! when love must look  
 On each face it loves with dread,  
 Kindred and friends! when a few brief hours  
 And the dearest may be dead!

"The months pass on, and the circle spreads,  
 And the time is drawing nigh,  
 When each street may have a darkened house  
 Or a c\_\_\_\_\_ passing by."299

From the Winchester Republican --

"They have shut him out with a fleet of ships  
 And a guarded quarantine  
 What, ho! now which of your watches slept?  
 For the Cholera's crossed your line!  
 "The devastator of Asia and scourge of Europe has reached  
 our shores -- 'the pestilence which walketh in darkness  
 and wasteth at noon day' stalks amongst us...An invading  
 army would not excite half the dread...The angel of destruc-  
 tion..would..is infinitely more sublime when he walketh in the  
 breathless silence and gloomy solitude of the pestilence...  
 around the deserted couch of pestilence and decay, what excite-  
 ment can be found to revive the languid spirit and invigorate  
 the wasted frame?"300

From the Portsmouth Journal --

"Ye have had your time--- if time there be,  
 For the love of the world and levity;  
 And now--- I come!  
 With a solemn voice to bid thee turn  
 Thy thoughts to the grave, the home of the worm.  
 "Ye have heard the tale of my awful sway,  
 While I linger's--- I linger'd ---from thee away;  
 But now--- I come!  
 To a land--- how richly blest of heaven---  
 To a people--- how many to error given!  
 "To the guilty ones, who may have made my path---  
 By forgetting God--- a track of wrath;  
 To those--- I come!  
 With terror, which death will ever bring  
 With a fearful pang--- with a deepening sting.  
 "But ye who rely on one strong arm  
 I would not--- I could not--- do you harm,  
 To you--- I come!  
 Not as the herald of better things  
 But to change thy clay--- for Angel's wings."301

From the Rochester Gem --

"Sir:

".....My father, who is a well known old serpent, named me Cholera, by way of simplifying by sympathy and regard for the gross and choleric portion of mankind. I am particularly attached to everything my parent has a hand in, consorting always, whatever country I inhabit, with the promoters of any kind of evil and iniquity. The profligate, the drunkards, the gluttons, the lazy, the dirty, the quarrelsome... I never fail to fix on those constitutions that have been enfeebled by debauchery...I prefer lodging always in narrow courts, in cellars underground, in the neighborhood of ponds, in the purlieus of publick houses redolent of bad beer, among effluvia of punch, whiskey, and blue ruin ....I pass by to revel in the rotten liven of drunkards, and to stir about the boiling bile of the sulky, the discontented and the litigious.

"I am, Sir, yours truly,  
"Cholera Morbus."<sup>302</sup>

Rare pieces of humor were occasionally found, but though humor it was termed, it seems, today, a bit on the stuffy side:

"A Canadian lady remarked 'that she was much afraid of losing her husband should the Cholera approach, as he had always been a real thorough-going democrat, and she understood it proved very fatal to the democrats. 'Fatal to the democrats!' exclaimed a bystander, 'it must be emigrants you mean!' 'Well,' said she, 'I don't know but what it might have been the emigrants, for 'twas some political party or other.'"<sup>303</sup>

"Mr. W. \_\_\_\_\_,' said a little girl to an apothecary of this city, 'Ma wants a pound of your Cholera alarm!' 'Cholera alarm? -- was that the name, my dear?' 'Yes, sir.' 'Cholera alarm -- wasn't it chloride of lime?' 'Oh, yes sir. I believe it was.'"<sup>304</sup>

On the third of September, 54 days after the commencement of the epidemic in Rochester, the Board of Health announced that the epidemic was officially at an end, although, from the chart (following page ) it may be seen that even on the "last day", there was one reported

case and a reported death. However, the Board had determined that no more public reports were to be made and so, so far as history is concerned, this must be assumed to have been the conclusion of the Cholera epidemic in Rochester in 1832.

In all, a variously reported 108 or 116 Rochesterians died of a reported 388 who had the disease; as previously indicated, this latter figure is probably considerably lower than the true figure. Grossly, not an appallingly large number, but taken comparatively in terms of the population in Rochester today, a comparably lethal epidemic would produce a mortality of 3600 and a morbidity of about 13,000, and this over a period of somewhat less than two months.

In contrast to European cities and many other American cities, the epidemic was actually attendant with relatively little panic. Business was impeded, many left town, a set of shacks destroyed, a block of buildings burned, and the hospital menaced. But under the guidance of a Board of Health possessed with a remarkable balance and insight, and an active and fearless Health Commissioner in the person of Ashbel Riley, the city survived the epidemic almost unscathed and, as a "western" boom town, continued to grow and prosper.

The epidemiology of the Cholera epidemic in Rochester, largely because of incomplete records, is far from clear. Although the names and addresses of all those afflicted were supposedly reported to the Board of Health, the only records now extant are to be found in the newspapers of the period (The Rochester Daily Advertiser and Anti-Masonic Inquirer). The reports published, commencing July 27, include only a street name and, in some instances, the degree of severity of the disease. Complications of incomplete files of the newspapers, plus absence of street numbers in Rochester, inconstancy of recording of the necessary data in the papers, makes a reconstruction of the epidemic spread of the disease extremely difficult.

The disease was initially introduced, as we have seen, by various of the canal travelers. A Mr. Polly was the first recorded case, but the disease flame was fanned by others who subsequently landed from canal boats. Had not other canal travelers been permitted to land, the disease might possibly have run an abortive course. But on this point we may only speculate. Until the canal boat, Western Barge (previously alluded to), landed in Rochester, but a few had been afflicted, but almost immediately following, the disease began to assume major proportions. As we know, the incubation period of Cholera is very brief, so brief in fact, that this episode may have played a very significant role in the epidemiology. Again, the episode may have been only coincident. We don't know.

In tracing the spread of the disease, I have divided the city into several large areas, these areas being partly contingent upon the length of particular streets, since it is rarely indicated as to what location on the street a particular reported case occurred.

Those streets adjacent to the canal are separated into special areas as completely as possible in an attempt to demonstrate the focal rise of the disease from the proximal canal region and its spread to more distant parts of the city. The transmission from person to person was most likely from personal contact or families or via "necessary" to well contamination, since virtually all residents obtained their water from a well and not from the canal as in more primitive parts of the world.

The original location of the disease principally in the proximal canal districts was very likely a result of more intimate contact of these people with the canal travelers.

Examination of the statistics discloses that Area I on the west side of the river, adjacent to the Cholera hospital and the disembarking point for many of those from canal boats, including the Western Barge, was afflicted most heavily early in the epidemic and rather lightly subsequently. Area II, a heavily populated area, adjacent to the canal and including the wealthy sections of the city, is large and, unfortunately, not further divisible. Statistics here demonstrate a transition between that of Areas I and III in severity of disease, i.e., a fairly heavy



morbidity throughout the epidemic. Area III, including those areas more distantly located from the canal, had a relatively few cases early in the epidemic, with an ever-increasing morbidity, proportionately higher toward the end of the epidemic.

Statistics relative to the less heavily populated east side of the river are less clearly defined -- this being largely because of difficulties in separating it into reasonable districts. However, even here, the Main and St. Paul Street districts (Area I) demonstrate the early susceptibility to the disease of the regions proximal to the canal, and the later, heavier affliction of those more distant.

## Districts east of the river:

I Area bounding canal on the east side of the city and the usually traveler-frequented Main St.

	July 27 to <u>Aug. 2</u>	Aug. 3 to <u>Aug. 9</u>	Aug. 10 to <u>Aug. 16</u>	Aug. 17 to <u>Aug. 23</u>	Aug. 24 to <u>Sept. 3</u>
St. Paul	10	2	2	1	1
Main	9	3	2	1	1

## II Areas more distant from the river

Dublin	2	0	2	0	2
Court	2	0	1	0	0
Elm	0	0	0	1	0
North	1	0	0	1	1
Franklin	0	1	1	0	0
Chestnut	1	0	0	0	1
Clinton	4	2	2	4	1
Andrews	0	0	0	1	0
Alexander	0	0	0	1	0
Water	0	0	0	1	0
Mortimer	3	0	0	1	1

Summary:

## West of river

Area I	12	12	3	5	0
Area II	18	13	18	13	7
Area III	9	11	19	22	9

## East of river

Area I	19	5	4	2	2
Area II	13	3	6	10	6

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298 Rochester Daily Advertiser, August 21, 1832  
299 Anti-Masonic Enquirer, VI, 99  
300 Winchester Republican, quoted Rochester Daily Advertiser,  
July 19, 1832  
301 Portsmouth Journal, quoted Rochester Daily Advertiser,  
August 3, 1832  
302 The Rochester Gem, IV, 116  
303 Rochester Daily Advertiser, August 21, 1832  
304 Ibid., August 20, 1832

CASES

CHOLERA -  
ROCHESTER, N.Y.  
1833

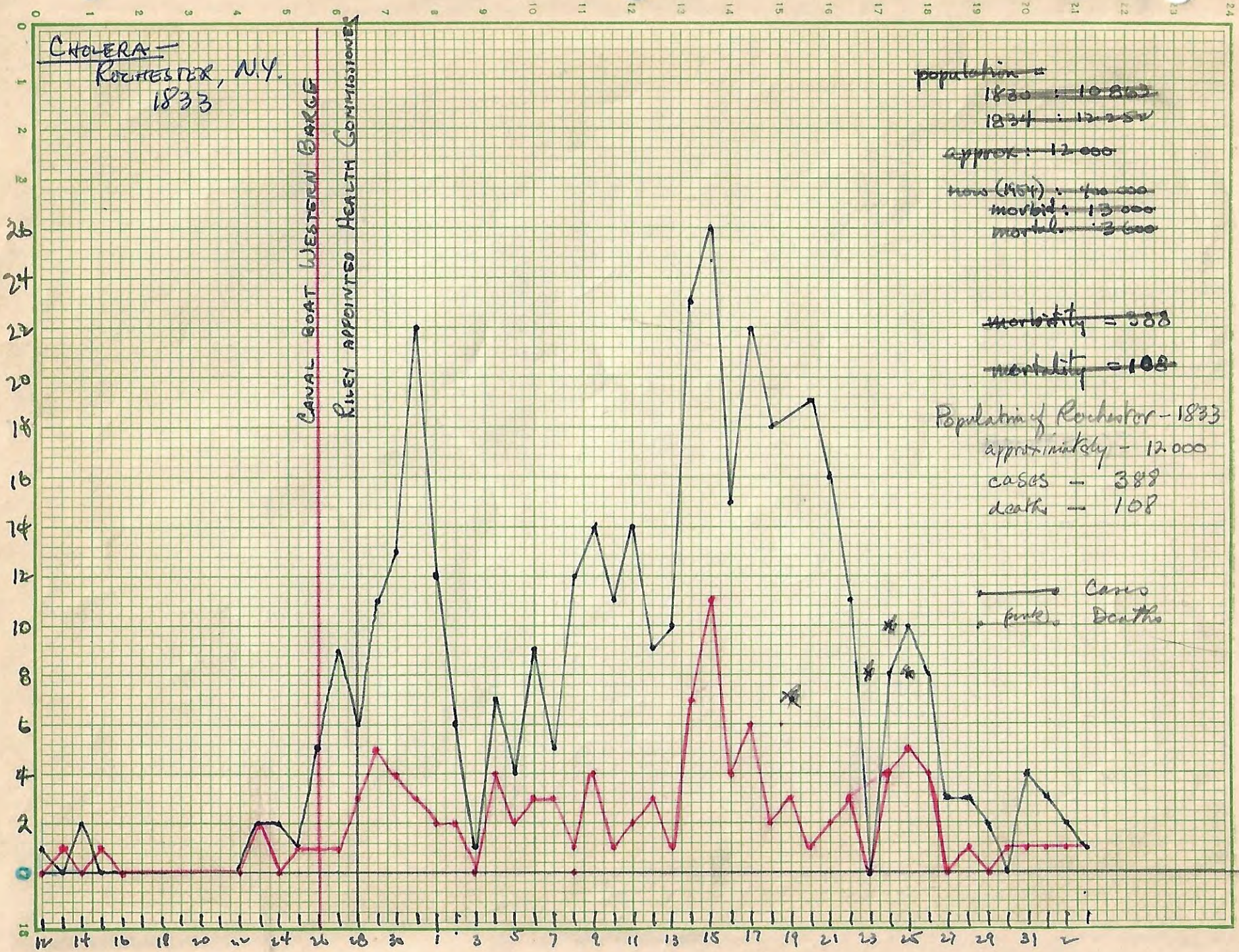
CANAL BOAT WESTERN BARGE  
RILEY APPOINTED HEALTH COMMISSIONER

population =  
~~1830 : 10,863~~  
~~1834 : 12,254~~  
approx: 12,000  
now (1854) : 40,000  
morbidity : 13,000  
mortality : 3,600

~~morbidity = 388~~  
~~mortality = 108~~

Population of Rochester - 1833  
approximately - 12,000  
cases - 388  
deaths - 108

—•— Cases  
—•— (pink) Deaths



July

August

CHOLERA - ROCHESTER, NEW YORK - 1833

