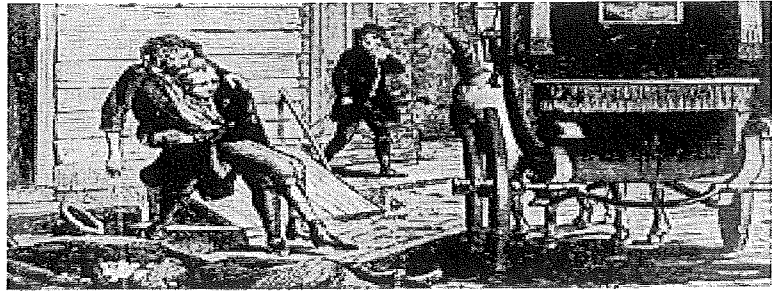


Philadelphia Under Siege: The Yellow Fever of 1793

By Samuel A. Gum, Summer 2010

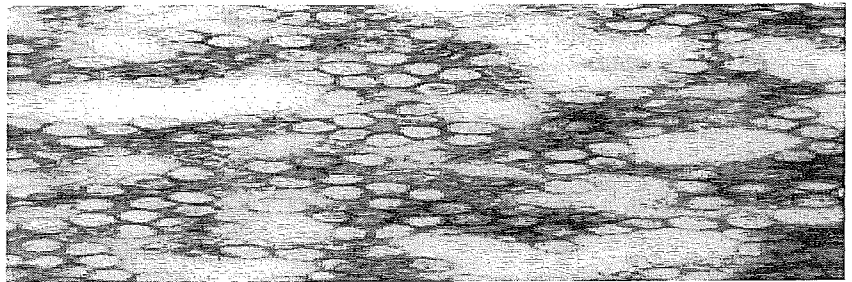


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Volunteers collected the dead and dying from Yellow Fever. Over 5,000 residents of Philadelphia died in 1793 from the great epidemic of 1793.

The summer was the hottest in years. The humidity was hardly bearable. The muddy swamps of Philadelphia spawned round after round of mosquitoes which relentlessly assaulted their human blood meals. An eerie chill bestowed the empty streets of Philadelphia as the only sound heard is of the carriages making their rounds to pick up the dead.

It was the summer of 1793 and a ghastly epidemic of Yellow fever gripped the largest city of America and the nation's capital. Samuel Breck, a newly arrived merchant to Philadelphia and later instructor to the blind, observed "the horrors of this memorable affliction were extensive and heart rending." Samuel Breck estimated that the number of deaths in 1793 by yellow fever was more than four thousand. Modern scholars estimate the number to be closer to five thousand, a tenth of the capital's fifty thousand residents. However, twenty thousand people, including Thomas Jefferson, George Washington, and much of the federal government had fled the city to escape the fever thereby making proportion of deaths among those who remained quite high. What could cause such a devastating epidemic to occur on Pennsylvania soil?



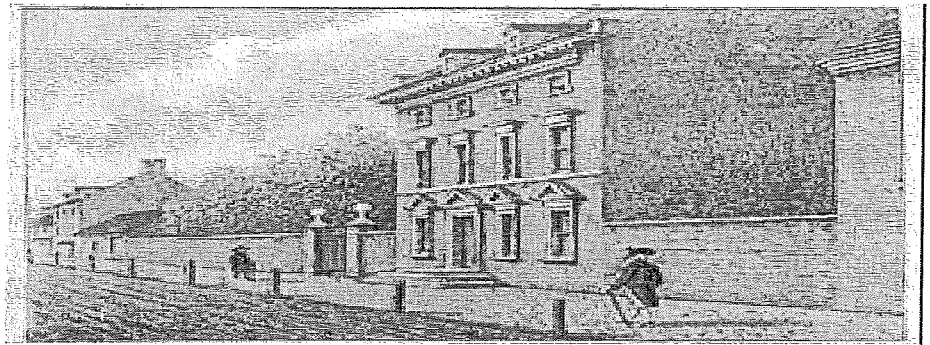
Centers for Disease Control

High magnification is required to see the real culprit of the yellow fever.

Yellow fever is an acute, infectious, hemorrhagic (bleeding) viral disease transmitted by the bite of a female mosquito native to tropical and subtropical regions of South America and Africa. However, it wasn't discovered that Yellow Fever was transmitted by mosquitoes until 1881. At the time, Yellow Fever was a well known illness that affected sailors who travelled to the Caribbean and Africa characterized by disquieting color changes including yellow eyes and skin, purple blotches under the skin from internal bleeding and hemorrhages, and black stools and vomit, all of which were accompanied by a high fever. In 1793, people of the French Caribbean colony of Saint Domingue (now Haiti) were fleeing a revolution from France and thousands of infected individuals landed at the Philadelphia docks. This combined with

the dry, hot summer and low water tables of 1793 created the perfect breeding grounds for mosquitoes and the spread of Yellow Fever.

On August 19, 1793, the first fatality of Yellow Fever, Peter Aston, became a topic of "general conversation" according to Mathew Carey, Irish-born American publisher and first hand witness to the beginning of the plague. At first, many residents believed it was simply a common autumnal illness. The prominent doctor of the time, Benjamin Rush, quickly identified the illness as Yellow Fever as more fell victim to its grasp. By August 25, "universal terror," as described by Carey, began spreading like wildfire through Philadelphia and many fled the city. There was so great a terror that carts, wagons, chairs, and coaches could be constantly seen leaving the city over the next few weeks. Those left behind sought refuge indoors. Congress was adjourned and moved to the then remote village of Germantown. Streets became empty as business halted. In 1900, Lillian Rhoades, author of *The Story of Philadelphia* commented that, "the hearse and the doctor's [carriage] were the sole vehicles on the street." She also stated, "The hospitals were in a horrible condition; nurses could not be had at any price: to go into a house in which nearly every bed contained a dead body, and the floors reeked with filth, was courting death in its most dreadful form."

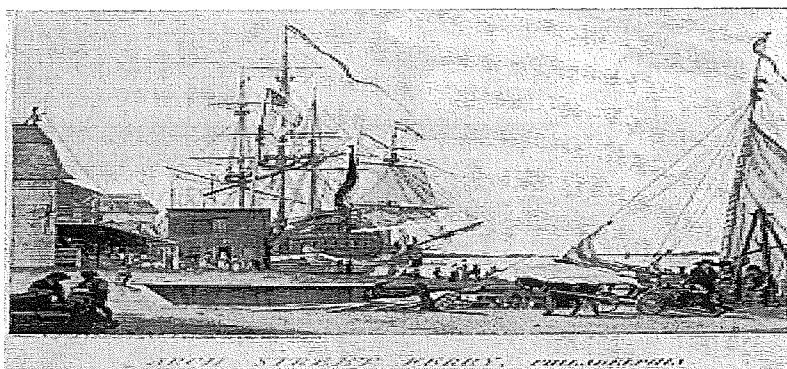


John Fanning Watson / *Annals of Philadelphia*, 1830

While many died in Philadelphia, many who were able fled the city, including President George Washington.

In the history of Pennsylvania, no city has ever faced its own mortality to the extent that Philadelphia suffered under the Yellow Fever affliction. The spread of Yellow Fever to Philadelphia resulted in panic and fear of death. The number of deaths changed from "ten victims a day in August to one hundred a day in October" and "sudden exit was of common occurrence" as depicted by Samuel Breck. He also noticed that people were "in health one day were buried the next." The city was almost completely unprepared for such a catastrophe. "No hospitals or hospital stores were in readiness to alleviate the sufferings of the poor" as mentioned by Breck. Hope became dismal. Rhoades also commented on the atmosphere of Philadelphia as "deserted and desolate."

Yet during such a tragedy, there was also an intense struggle for a cure and containment. Doctor Benjamin Rush, one of the signers of the Declaration of Independence, became the leader of the fight against Yellow Fever. Though urged to flee the city like others, Rush said, "I have resolved to stick to my principles, my practice, and my patients to the last extremity." Dr. Rush gave the people of Philadelphia courage and hope.



William Birch / *The City of Philadelphia*, 1800

Dr. Rush mistakenly believed the origin of the 1793 epidemic in Philadelphia to be unsanitary conditions and rotten vegetables.

Fear engulfed the city of Philadelphia. While many resorted to prayer and appealed to the divine, Dr. Rush believed that Yellow Fever was caused by unsanitary conditions, especially those of the docks, sewage system, and rotting vegetables such as rotting coffee from the Arch Street wharf. He concluded that the illness was not transmitted from human to human but by "putrid exhalations" in the atmosphere. He also recognized that weather played a part in the epidemic and that the infection did not spread from human to human contact. Though many people of the time wanted to point blame at the newly arrived Saint Domingue revolution refugees, Rush was adamant to not point the blame to outsiders but instead accused the sanitary conditions of the city and implore residents to clean up the city so as to not "entail the disease upon future generations."

He believed the epidemic could be prevented by cleaning the docks, pumping out the bilge water of ship (water that collects and stagnates in the bilge of a ship), cleaning sewers more often, washing the streets in warm weather, removing filth from home better, emptying toilets more often, stopping building so close in alleys, and eating less meat in the summer. In regards to disease, Rush has said, "To every natural evil, Heaven has provided an antidote."

African Americans played a vital role in the epidemic of 1793. Rush pleaded for the help of Philadelphia's free black community, believing that African Americans were immune to the disease. African Americans worked tirelessly with the sick and dying as nurses, cart drivers, coffin makers, and grave diggers. Absalom Jones and Richard Allen, religious leaders who would later go on to found the first black churches of Philadelphia, African Episcopal Church of St. Thomas, and African Methodist Episcopal Church, respectively, described their experience as volunteers in 1793: "at this time the dread that prevailed over people's minds was so general, that it was a rare instance to see one neighbor visit another, and even friends when they met in the streets were afraid of each other, much less would they admit into their houses." This was not the only horror that Absalom Jones and Richard Allen observed. They observed horrendous behavior from the fearful citizens of Philadelphia: "[Many white people]...have acted in a manner that would make humanity shudder." Despite Dr. Rush's theory, 240 African Americans died of Yellow Fever.

The unwilling victims of Yellow Fever were not just the infected. Children often suffered from a milder case of Yellow Fever while adults severely suffered. The number of orphans increased as parents became casualties to the fever. Jones and Allen observed, "A woman died, we were sent for to bury her, on our going into the house and taking the coffin in, a dear little innocent accosted us with, mamma is asleep, don't wake her; but when she saw us put her in the coffin, the distress of the child was so great, that it almost overcame us; when she demanded why we put her mamma in the box? We did not know how

<http://pabook.libraries.psu.edu/palitmap/YellowFever.html>

to answer her, but committed her to the care of a neighbor, and left her with heavy hearts." However, as a result, many orphanages were created to meet the growing needs.

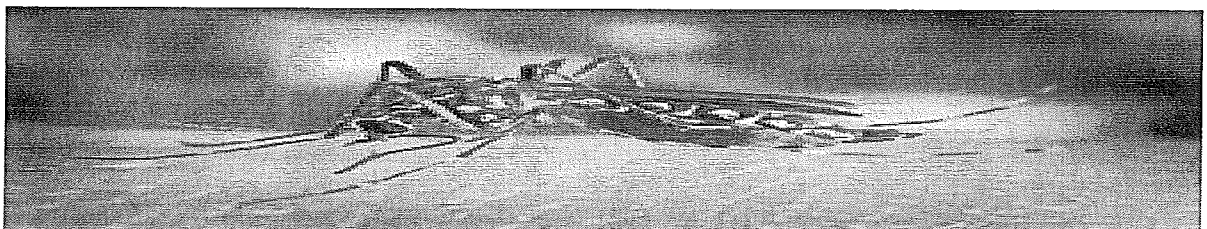


Charles Willson Peale / Wikipedia

Doctor Benjamin Rush was a teacher, chemist, author humanitarian, politician, reformer, abolitionist, AND one of the youngest signers of the Declaration of Independence.

Benjamin Rush did find his own treatment for Yellow Fever by October. By blood leeching and purging patients Dr. Rush decreased mortality. In some cases, he would remove a very high proportion of blood from the body. He often gave calomel, a mercury compound, as a method to purge the bowels. There were several doctors and public figures such as journalist William Cobbett who attacked his Rush's medical practice. William Cobbett was the primary political enemy of Rush going so far as to calling him "a quack," "a murderer," and "mentally unstable" according to Jim Murphy, author of *American Plague: The True and Terrifying Story of the Yellow Fever Epidemic of 1793*. Later in 1800, Rush would sue William Cobbett for libel for the amount of \$5,000, after which William Cobbett fled the country in disgrace.

Though there is no true cure and a vaccine was not developed until 1937, Dr. Rush's avid conviction to his personal cure gave his patients strength and hope. It is estimated that Rush's medical treatment saved over 6,000 people with his dedication and perseverance to find a treatment. At one point Dr. Rush himself fell ill to Yellow Fever. With his own treatment administered by one of his assistants, he became healthy despite a persistence cough. Lillian Rhoades comments on opinion of Rush after the outbreak, "Dr. Benjamin Rush, whose heroism during the Yellow Fever epidemic in Philadelphia during 1793 endeared him even to his political enemies."



James Gathany / Centers for Disease Control

Mosquitoes spread Yellow Fever by biting uninfected individuals after biting infected ones.

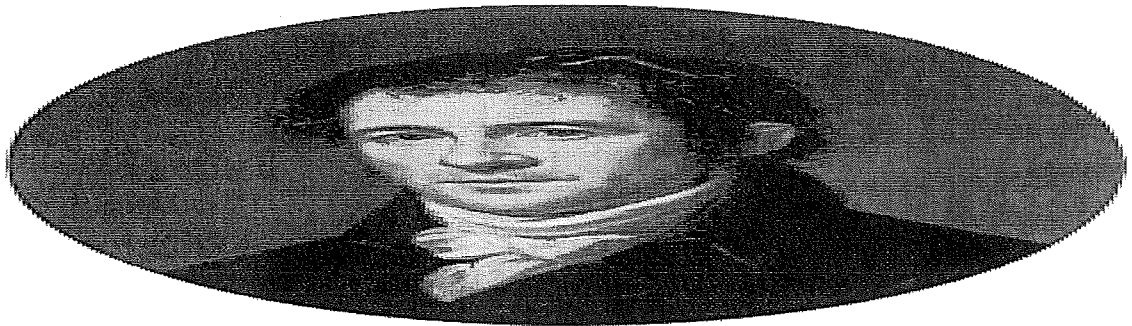
Frosts in mid to late October which froze over the stagnant pools of water where mosquitoes breed greatly decreased the incidence of Yellow Fever infections. By November, the horrific epidemic was

<http://pabook.libraries.psu.edu/palitmap/YellowFever.html>

over and residents finally returned to their homes and lives. Those who stayed such as Dr. Rush or Absalom Jones to fight the Yellow Fever were glorified heroes. Circuit Judge William Bradford, after hearing of Rush's deeds wrote, "he is become the darling of the common people and his humane fortitude and exertions will render him deservedly dear." The only conflict that remained was the cause of the Yellow Fever plague and whether it was from the filth of the city as Rush believed or the opinions of others who "argued that the seeds of the disease came from the West Indies" as stated by modern author Bob Arnebeck. Soon after, the governor, Thomas Mifflin, "embraced both ideas called for greater civic cleanliness and stricter quarantines and inspection of incoming vessels" as Bob Arnebeck noted.

The Yellow Fever epidemic of 1793 forever changed Philadelphia. Though the initial impact was gloom and dread, great adaptations were made by the people of Philadelphia. Hospitals, isolation hospitals, and orphanages were built. Political leaders learned the importance of nursing care from the epidemics and attempted to provide it more carefully.

Aggressive attempts were made to improve the city's sanitary conditions. Laws came into existence for homeowners to hold responsibility for cleaning up their property. Murphy stated these cleanliness laws were "rather weak and generally ignored by all." However, during the nineteenth century these laws would eventually be enforced.



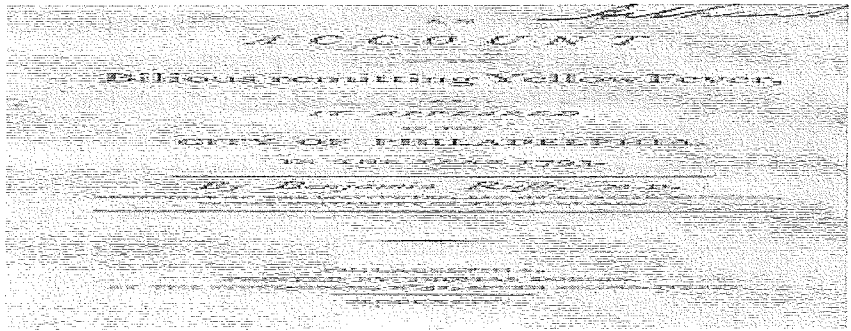
Charles Willson Peale, 1804 / Wikipedia

Benjamin Latrobe designed the Philadelphia water system in the wake of the Yellow Fever epidemic.

A great improvement was made in Philadelphia's water supply following the Yellow Fever outbreak. Waste from privy pits, byproducts of manufacturing, and trash of markets seeped into private and public wells used for drinking and cooking which resulted in what Jim Murphy describes as "evil-smelling and evil-tasting water." The citizens of Philadelphia believed that foul-smelling water could be the cause of health problems. In 1799, Benjamin Latrobe, Father of American Architecture, was hired to design and construct Philadelphia's first waterworks and the first water system in the United States. Latrobe's waterworks design removed water from the Schuylkill River by a steam-engine pump which pumped the water to a central pump house. The central pump house, located at the large central square at Broad and High Streets, used another steam-engine pump to lift the water into huge wood reservoirs which used gravity to carry the water to houses and businesses around the city. Water from the central pump house surged with the power to wash streets and docks. Even bathing became a great deal more common. Latrobe later went on to design the current capital of the United States, Washington D.C. Ironically, he died of Yellow Fever while constructing the waterworks of New Orleans in 1820.

One of the immediate changes to Philadelphia was the dispersal of residents who lived on the water side of Philadelphia. Merchants, then living on Water or Front Street, moved to reside in western outskirts of Philadelphia. Population movement changed the growth of Philadelphia away from the water front.

<http://pabook.libraries.psu.edu/palitmap/YellowFever.html>



Dickinson College Archives

Dr. Rush recorded his thoughts *An Account of the Bilious Remitting Yellow Fever, as it Appeared in the City of Philadelphia, in the Year 1793*. Philadelphia: Printed by Thomas Dobson, at the Stone House, no. 41, South Second-street, 1794.

Click this picture to go to Dickinson College's online edition of the text.

Benjamin Rush had an enormous impact on the growth of medicine and medical care. However, at the time many other physicians of the College of Physicians disagreed with Rush's belief of the cause. Rush resigned from the College of Physicians as he viewed "flawed medical logic and professional jealousy" from his peers as stated by Jim Murphy, the American award winning author. Though the cause of Yellow Fever would not be known for another century, Rush was criticized for his belief that the illness was not imported. He later wrote several books on his experience with Yellow Fever. Rhodes later describes, "The writings of Dr. Rush have claimed the attention of the medical world for their novelty, extent, variety, and accuracy." Though incorrect in his cure for Yellow Fever, Dr. Rush's scientific methods left a legacy for future generations to follow in the identification of emerging infectious diseases.

Yellow Fever tore through the city like wildfire causing the death of one-sixth of the population remaining. Though many tried to flee the city, the effects of such a devastating epidemic could not be avoided. Out of the death and decay, several of history's greatest doctors such as Benjamin Rush became combatants against the plague and consequently advanced medicine. The growth of Philadelphia and the history of Pennsylvania were forever altered by this tragedy endured by the residents of Philadelphia. As Murphy stated, "everyone - even those who had run from the city - considered himself or herself a survivor." The Yellow Fever epidemic of 1793 can be considered a crucial part of not only Pennsylvania's history, but of the history of human strength and fortitude during unbelievably difficult times.

Name:

Date 10/3/13

Point of View

Point of View means that the story is told through the eyes and mouth of a certain person; the story can change considerably, depending on who is telling it.

- ❖ **First-person** point of view is in use when a character narrates the story with *I-me-my-mine* in his or her speech. The advantage of this point of view is that you get to hear the thoughts of the narrator and see the world depicted in the story through his or her eyes. However, remember that no narrator, like no human being, has complete self-knowledge or, for that matter, complete knowledge of anything. Therefore, the reader's role is to go beyond what the narrator says.
- ❖ **Second-person** point of view, in which the author uses *you* and *your*, is rare; authors seldom speak directly to the reader. When you encounter this point of view, pay attention. Why? The author has made a daring choice, probably with a specific purpose in mind. Most times, second-person point of view draws the reader into the story, almost making the reader a participant in the action.
- ❖ **Third-person** point of view is that of an outsider looking at the action. The writer may choose *third-person omniscient*, in which the thoughts of every character are open to the reader, or *third-person limited*, in which the reader enters only one character's mind, either throughout the entire work or in a specific section. Third-person limited differs from first-person because the author's voice, not the character's voice, is what you hear in the descriptive passages.

Activity:

You will write a one paragraph summary that identifies the point of view of the novel and explains why you think this. I suggest you use evidence from the text to support your interpretations. Lined paper, I suggest you type it. I must be able to read it.

Due Date: _____

"Philadelphia Under Siege" by Samuel A. Gum

Read the article. Once you have read the article all the way through, answer the following questions on a separate piece of paper. Answer in complete sentences and all parts of the question. Staple this handout to the top of your questions.

1. What is the subject of this article?
2. How do you know?
3. What is the virus discussed in this article?
4. How did it start?
5. How did it end?
6. How did it effect the population of Philadelphia? Give one textual evidence
7. What were the physical effects of the virus on its human victims?
8. How did this epidemic change the history of Philadelphia?
9. Why do you think the author of Fever 1793 set this book in this time of history? What was her purpose? How do you know?
10. Who was Dr. Rush?
11. What was his role in the yellow fever epidemic of 1793?
12. How did this epidemic affect the children of the time?
13. Who was Benjamin Latrobe?
14. What was his role during this yellow fever epidemic?

