**The ‘Black Death’: A Catastrophe in Medieval Europe**

**Millions of people in Europe perished in the plague that struck in the mid-1300s. Later called the “Black Death,” this plague upended feudal society and hastened major changes in Western Civilization.**

Since the last Ice Age, a certain flea has lived off the blood of rodents, especially the black rat, in Central Asia. The black rat flea is also the primary host of the deadly plague bacteria, *Yersina pestis* (named after Alexandre Yersin who discovered it in 1894).

A flea infected with Y. pestis passes it on to a black rat by biting it. When the rat dies, the flea jumps to another rat. Normally, enough rats have genetic resistance to *Y. pestis* to prevent a mass die-off.

Sometimes, however, a change in climate or other conditions may weaken the rat population, and infected fleas kill off more rats than usual. If the fleas cannot find rats, they find different warm-blooded animals to bite, such as other rodents, cows, horses, cats, and humans.

When an infected flea bites a person, it literally vomits the Y. pestis bacteria into the wound. The bacteria migrate to the lymph glands and block the body’s attempt to destroy them by attacking the immune system.

There are several forms of the plague. The most common is the bubonic plague. Its main symptom is the swelling of lymph glands, called “buboes,” in the groin, armpits, or neck. Victims experience a high fever, and they often bleed under the skin, causing visible dark patches. This discoloring of the skin gave the name “Black Death” to the plague that struck Europe in the mid-1300s.

The bubonic plague does not pass directly from person to person. Usually, a rat flea carrying *Y. pestis* must bite a person to cause the infection. Bubonic plague victims during the medieval epidemic had only a 50–50 chance of surviving.

A second form of plague is pneumonic, in which the bacteria attack the lungs. The most common symptom is coughing and spitting up blood. The pneumonic form may develop in the late stages of bubonic plague as bacteria invade the lungs.

Unlike bubonic plague, the pneumonic form is highly contagious. Someone can catch this form of the plague by breathing in bacteria that a sick individual has coughed or sneezed into the air. Few survived this form of the plague during the Black Death.

**The Path of the Black Death**

Sometime around 1300, the climate began to get hotter and drier in Central Asia. Millions of black rats left their home territories in search of food. Many found food in the camps of Mongol nomadic herders who lived on the vast plains of the Asian interior. The Black Death began here.

Central Asia was the core of the Mongol Empire. By the late 1200s, the Mongols had taken China, overrun Russia, and conquered Muslim lands from Afghanistan to Baghdad. As Mongol armies moved about the empire with their supply wagons of grain and other food, they attracted rats and the fleas infected with the plague.

By the 1330s, merchant caravans were passing right through plague-infested Central Asia. Once the plague reached China’s ports, stowaway plague rats and fleas traveled by ship to India and Arabia.

Genoa was one of Italy’s greatest trading powers in the eastern Mediterranean. It had established a center for the Asian caravan trade at the Black Sea port of Caffa. In 1346, a dispute between the local Mongol khan and the Genoese led to a minor war. During the siege of Caffa, the plague struck the Mongol soldiers. When the Genoese sailed home, their ships carried hundreds of rats and infected fleas in their food supplies below deck.

When the ships reached Constantinople (now Istanbul), a major trading port on the doorstep of Europe, many of those aboard were sick or dead of the plague. Officials at Constantinople prohibited the sick Genoese from entering the city. But this did not stop rats and fleas from leaving the ships and infecting the harbor rats.

From Constantinople, trading vessels, carrying plague rats and fleas, spread the disease to eastern Mediterranean countries like Egypt and Syria. Within two years, the plague had spread throughout the entire Muslim empire from Arabia across North Africa to Granada in southern Spain. Perhaps one-third of the Muslim people died. The path of the Black Death through Europe was even more catastrophic.

**The Black Death in Europe**

The plague was not a new disease to Europe. Periodically, it broke out of its home among the rodents of Central Asia to bring death to Europeans. But it had been 800 years since the last major plague epidemic had struck Europe. Thus, the people had little natural immunity to the *Y. pest*i*s* bacteria.

Most people in Europe lived in small villages close to grain fields. Their cramped houses composed of sticks, mud, and straw roofs made it easy for rats to invade and built nests. In crowded European towns, rats feasted on waste from outdoor slaughterhouses and garbage dumped into the streets.

Sicily was the first place in Europe to suffer the plague epidemic. Italian traders brought the disease in rat-infested ships from Constantinople in October 1347. Soon entire families were dying.

Ships then took the plague to Italy’s major trading ports of Genoa, Pisa, and Venice. Venice was probably Europe’s largest and richest city with a population of about 150,000. It was also the first to adopt public health laws to block the plague. Even so, Venice lost 60 percent of its people to the Black Death.

By 1348, the plague had reached the interior of Italy, including Florence, which lost half its population. The Italian writer Giovanni Boccaccio witnessed and wrote about the plague in his book, *The Decameron*. In his introduction, Boccaccio described the sometimes-shocking way people in Florence behaved during the plague:

Tedious were it to recount, how citizen avoided citizen, how among neighbors was scarce found any that showed fellow-feeling for another, how kinsfolk held aloof, and never met . . . nay, what is more, and scarcely to be believed, fathers and mothers were found to abandon their own children, untended, unvisited, to their fate, as if they had been strangers.

From Italy, the plague spread throughout Europe. It headed west to Christian Spain and surged north into France. The plague advanced “town by town.” It reached the many ports of England, which lost half its population in 18 months.

In 1348–49, the Black Death swept into Central Europe and Scandinavia, even as far west as Greenland. But the *Y. pestis* bacteria possibly mutated to a weaker strain since the death rate dropped as the plague spread into Eastern Europe and Russia.

In 1352, the plague reached Moscow, only a few hundred miles from Caffa, the first city struck by the epidemic. Thus, the Black Death completed a great circle, wiping out from one-third to one-half of medieval Europe’s total population.

**The Response of Religion and Medicine**

In Christian Europe, the Roman Catholic Church explained the plague as God’s punishing the sins of the people. The church called for people to pray, and it organized religious marches, pleading to God to stop the “pestilence.”

Few university medical schools existed in Europe. The “physicians” of these schools had mastered the medical writings of the ancient Greeks. But these academic doctors never treated patients. Lesser-trained surgeons and other healers used various practical skills and remedies to treat the sick.

The prevailing theory of keeping healthy was for the body to maintain the proper balance of fluids, called “humors.” Breathing any foul air or vapors from dead bodies, polluted water, or even gases released by earthquakes could unbalance the humors.

At the plague’s peak in France, the medical faculty of the University of Paris wrote a report on how the disease began. The report declared that the alignment of planets “drew up evil vapors from the earth,” which were spread by “wild and southerly winds.” When breathed in, so went the report, foul air “penetrates to the heart and corrupts the substance of the spirit that is in it.”

The European physicians had lots of advice on how to avoid the plague:

•  Flee as the plague approaches.

•  Avoid exercise and bathing.

•  Burn incense and carry flowers.

•  Smell strong odors as from a latrine to overcome the plague vapors.

•  Wear religious medals and papers with magic words like “Abracadabra.”

European doctors recommended treatments such as drinking a potion of ground chicken bones, cutting open and burning the buboes, and even swallowing the pus of the buboes. Another popular treatment was bleeding patients to remove the “bad humor.”

As in Christian Europe, Muslims believed that God’s will caused the plague. But Muslim religious scholars taught that the plague was a “martyrdom and mercy” from God, assuring the believer’s place in paradise. For non-believers, it was a punishment.

Some Muslim doctors cautioned against trying to prevent or treat a disease sent by God. Others adopted many of the same preventive measures and treatments for the plague used by the Europeans. These Muslim doctors also depended on the writings of the ancient Greeks.

**Pogroms and the Flagellants**

In 1348, a rumor claimed that Jews were responsible for the plague as an attempt to kill Christians and dominate the world. The rumor spread quickly, supported by a widely distributed report of the trial of Jews who supposedly had poisoned wells in Switzerland. Swiss officials claimed the charges were true since “many Jews have been submitted to torture” and confessed.

The rumor set off a wave of pogroms (violence) against Jews. Christians attacked them in their communities, burned their homes, sent them down the Rhine River in wine barrels, and murdered them with clubs and axes. In perhaps the worst case, the people of Strasbourg locked up and burned 900 Jews alive.

In October 1349, Pope Clement VI issued a religious order to stop the violence against the Jews. He said that Jews did not cause the plague, but rather it was “the result of an angry God striking at the Christian people for their sins.” He also accused some of those leading the pogroms of hoping to escape debts that they owed to Jewish moneylenders.

As the hysteria quieted down, some Christians turned their anger at the Catholic Church that seemed helpless to stop the Black Death. In fact, many local priests either died of the plague or abandoned their parishes when it struck. The church’s failure led to thousands of people joining the Flagellant Movement.

Bands of several hundred Christian men marched and sang hymns from town to town in a ritual of repentance for their sins. They wore hooded white cloaks with a red Christian cross.

When they arrived at a town’s main church, they stripped to the waist, formed a moving circle, and chanted prayers. As they did this, they beat themselves with a whip, consisting of a stick with three leather straps, each with a piece of sharp metal knotted at the end. Periodically, the bleeding flagellants (persons who whip themselves) would fall down and lay on the ground in the shape of a cross. Crowds gathered to watch the spectacle. A master of the flagellants finally read a “Heavenly Letter,” calling for all to repent their sins and plead with God to end the terrible plague.

The Flagellant Movement was a direct challenge to the authority of the Catholic Church. Pope Clement VI condemned it as a form of heresy (against church beliefs) in 1349. By the following year, as the plague faded in Western Europe, the Flagellant Movement disappeared.

**After the Black Death**

Before the Black Death in Europe, the population had grown to about 75–80 million people. Farm production barely met the needs of most people to subsist (survive day to day), causing widespread poverty. When wheat and other crops failed, malnutrition and famine brought widespread suffering.

The Black Death greatly reduced the population of Europe. The total number of deaths is estimated at between 25 and 40 million people. With fewer people, the land could produce a surplus of food for the much lower population.

For a short period, food prices rose because of the shortage of farm labor. But the food supply soon exceeded the demand due to fewer consumers, causing lower prices.

With so many free tenant farmers, laborers, and craftsmen killed off, those who survived began to demand lower farmland rents, higher wages, and higher prices for their handmade goods. Serfs, also reduced in large numbers, demanded reductions of feudal duties they owed to their manor lords.

Most manor lords were forced to give in to the demands of their serfs, free tenants, and laborers. In towns, craftsmen demanded higher prices for their goods. All these changes drastically cut the income of the land-owning lords.

As the lords suffered an economic decline, the lower classes enjoyed a higher standard of living. Throughout Europe, the noble elite complained that workers were greedy, lazy, and refused to work on a long-term basis. As one nobleman put it, “Servants are now masters and masters are servants.”

The nobles attempted to pass laws to put the lower classes back in their place. The Statute of Laborers, passed by the English Parliament in 1351, made it a crime for workers to accept wages higher than what they had received before the plague.

Noblemen also complained about the high prices and the fine clothes commoners were now able to buy. More laws attempted to set prices and regulate what different social classes could wear.

Some serfs, free tenants, laborers, and craftsmen resisted the attempts by the feudal lords to undercut their better living conditions. Serfs ran away, refused to be servants, and even sued their lords. The English Peasants’ Revolt of 1381 erupted after Parliament, for the first time, imposed a tax on the lower classes. Similar revolts took place throughout Europe.

Less severe plagues revisited Europe regularly for 100 years after the Black Death. This kept the population unusually low and economic conditions unusually favorable to those who barely had enough to eat before the plague.

**Long-Term Changes**

The Black Death hastened long-term changes in Europe. The shortage of workers spurred new labor-saving inventions such as Gutenberg’s printing press. Higher incomes for more people stimulated the demand for foreign imports, which led to the exploration of long-distance trade routes.

Feudal society changed. Kings gained power over land-owning barons. The Catholic Church lost some of its authority, setting the stage for the Protestant Reformation. Serfdom disappeared in most of Western Europe by the mid-1400s.

Medicine in Europe became more open to scientific observation and evidence. Hospitals turned into places for treatment instead of merely places for people to die. Cities grew more aware of the importance of sanitation, garbage collection, and public health measures such as food inspection.

Plague epidemics ended in Europe by 1700. They disappeared entirely in the world by 1900 after Alexandre Yersin’s discovery of *Y. pestis* and the flea-rat connection. His discovery led to the extermination of rats on ships and in ports and the discovery of anti-plague drugs.

*Y. pestis* still exists today, but in fleas living mainly among rodents like squirrels in isolated wilderness areas. Fewer than 200 now die of the plague worldwide each year, mainly due to lack of treatment.

**For Discussion**

1. Why do you think the Black Death spread so fast and was so severe?

2. Why do you think Jewish pogroms and the Flagellant Movement arose during the Black Death in Europe?

3. The Black Death was a catastrophe for medieval Europe, killing almost half the population. What other effects did it have on Europe, positive and negative?

**For Further Reading**

Aberth, John. *The Black Death, The Great Mortality of 1348-1350*, *A Brief History with Documents.* Boston: Bedford/St. Martin’s, 2005.

Kelly, John. *The Great Mortality: An Intimate History of the Black Death, the Most Devastating Plague of All Time.* New York: Harper Perennial, 2005.

**A C T I V I T Y**

**Ranking Catastrophes**

Unfortunately, the modern world is not free from potential catastrophes. In fact, popular literature, movies, and the media often focus on possible disasters. Questions arise about these disasters: What are the odds they might happen? Can we do anything to prevent them? How much, in terms of resources and money, should we devote to guarding against them?

In this activity, students will evaluate the catastrophes listed below. Form small groups.  Each group should do the following:

1.  Read and discuss each possible catastrophe. Consider each in terms of its potential loss of life, potential impact on the world economy, potential impact on the environment, probability of happening, and possibility of doing anything about it.

2. Rank the catastrophes from 1 to 5. The number 1 is the potential catastrophe you believe is the most pressing and should have the most resources devoted to guarding against it. Number 5 is the least important.

3. Prepare to defend your group’s ranking with reasoned arguments.

**Possible Catastrophes**

**a.  Flu pandemic.** In 1918, a flu pandemic killed 50 million people worldwide. It was highly contagious, and the virus had mutated into a much different flu virus so people did not have immunity. Two other flu pandemics occurred in the 20th century, and another, the “swine flu” is currently underway. In these pandemics, the virus was not as lethal as in 1918, but a future strain could be.

**b. Tsunamis.** Tsunamis are large ocean waves caused by earthquakes, volcano eruptions, or other explosions. They can devastate coastal areas. In 2004, an Indian Ocean tsunami killed more than 200,000 people.

**c. Climate change.** Global warming causes more violent weather, rising sea levels, bigger wildfires, more animal and plant extinctions, interruptions in food production, and possible epidemics of certain diseases.

**d. Asteroid/comet impact with earth.** About 65 million years ago, an impact collision created a crater 110 miles in diameter near the Yucatan Peninsula of Mexico. This changed the climate and probably led to the extinction of the dinosaurs.

**e. Nuclear terrorism.** Terrorists may have difficulty obtaining and detonating a nuclear bomb, so the main danger probably lies in terrorists obtaining radioactive material and detonating a conventional bomb to spread the material to poison a city’s population.