

Cambridge University Press

978-0-521-84639-4 - Plague and the End of Antiquity: The Pandemic of 541-750

Edited by Lester K. Little

Excerpt

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I

INTRODUCTION

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1

Life and Afterlife of the First Plague Pandemic

Lester K. Little

In the summer of 541 AD a deadly infectious disease broke out in the Egyptian port city of Pelusium, located on the eastern edge of the Nile delta. It quickly spread eastward along the coast to Gaza and westward to Alexandria. By the following spring it had found its way to Constantinople, capital of the Roman Empire. Syria, Anatolia, Greece, Italy, Gaul, Iberia, and North Africa: none of the lands bordering the Mediterranean escaped it. Here and there, it followed river valleys or overland routes and thus penetrated far into the interior, reaching, for example, as far east as Persia or as far north, after another sea-crossing, as the British Isles.¹

The disease remained virulent in these lands for slightly more than two centuries, although it never settled anywhere for long. Instead, it came and went, and as is frequently the case with unwelcome visitors, its appearances were unannounced. Overall, there was not a decade in the course of those two centuries when it was not inflicting death somewhere in the Mediterranean region. In those places where it appeared several times, the intervals between recurrences ranged from about six to twenty years. And then, in the middle of the eighth century, it vanished with as little ceremony as when it first arrived.²

Thus did bubonic plague make its first appearance on the world historical scene. Diagnosis of historical illnesses on the basis of descriptions in ancient texts can rarely be made with compelling certainty because all infectious diseases involve fever and the other symptoms tend not to be exclusive to particular diseases. Plague, however, is a major exception

¹ Scarborough and Kazhdan, "Plague."

² Biraben, *Les Hommes et la peste*, 1:27–32.

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because of the unmistakable appearance of buboes on most of its victims, those painful swellings of the lymph nodes that appear in the groin, in the armpit, or on the neck just below the ear. Taken together, the dozens of epidemics of this disease that broke out throughout the Mediterranean basin and its hinterlands between the mid-sixth and mid-eighth centuries constitute the first historically documented pandemic of plague, the first of three.³

THE THREE PANDEMICS

What came before were lethal epidemics to be sure, but of diseases that still lack generally agreed-upon diagnoses. The most notable of these were the ‘plague’ at Athens in 430 BC described by Thucydides, in which Pericles died, the Antonine Plague in Galen’s time that stretched over much of the Roman Empire between 169 and 194, in which Marcus Aurelius died, and that of a century later, between 250 and 270, in which another emperor, Claudius Gothicus, died. Smallpox, typhus, and measles were most likely the diseases involved in those epidemics.⁴ Meanwhile Greek and Roman medical writers, who commented on and anthologized the works of Hippocrates, apparently knew of plague, if only as an endemic disease. In the works compiled by such writers as Aretaeus of Cappadocia (mid-first century AD), Rufus of Ephesus (late first century AD), and Oribasius (late fourth century AD), plague appears not as a disease experienced or observed, but as one heard about from the far side of the Mediterranean.⁵ They made frequent reference to cases in Egypt and Libya, less often in Syria, in which the sick and deceased had malignant buboes. Thus the presence of endemic plague in the ancient Near East centuries before the outbreak at Pelusium appears reasonably well attested. Then, when the disease did appear in full view of literate observers beginning in 541, some of these individuals gave convincingly precise descriptions of plague symptoms. And as this debut took place during the reign of the Emperor Justinian, Byzantinists especially refer to this outbreak as the “Plague of Justinian” or the “Justinianic Plague.”⁶

³ Brothwell and Sandison, *Diseases in Antiquity*, 238–46; Cockburn, “Infectious Diseases.”

⁴ Thucydides, *Peloponnesian War* 2.47–54, vol. 1:340–57; Gilliam, “Plague under Marcus Aurelius”; Duncan-Jones, “Impact of the Antonine Plague”; Zosimus, *New History* 1:26, 37, 46, pp. 8, 12, 14. On epidemics in the Roman Empire: Rijkels, *Agnosis en Diagnostis*.

⁵ Conrad, “Plague in the Early Medieval Near East,” 73.

⁶ Allen, “‘Justinianic’ Plague.” Michael McCormick suggests “Justinianic Pandemic” in the title of his essay in this volume.

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The second pandemic, well known to all readers of history as the “Black Death,” erupted in Central Asia in the 1330s, reached the Crimea by 1346, and then moved on the following year to Constantinople and thence to ports all around the Mediterranean. It spread more widely and moved further inland than it had eight hundred years before, for example, by reaching Scandinavia and also far into the Arabian peninsula for the first time. For more than a century and a half it continued to recur with notable regularity, but then became sporadic, though still deadly, vanishing from Europe in 1772, but lingering in the Near East until the 1830s.⁷

The third pandemic broke out in China in the second half of the nineteenth century. It reached massive proportions and gained world attention in 1894 when it struck Canton and Hong Kong. While Europe, which so suffered from the Black Death, has barely ever been touched by this third, nameless pandemic, the disease has found its way to much of the rest of the world, excluding the polar regions but including the United States. Where sailing ships of the Age of Exploration, which fell within the time period of the second pandemic, failed to export plague to the New World, the speedier steamship succeeded. Plague crossed the Pacific to Honolulu and from there to San Francisco in 1899, and a gigantic disease pool has since developed among the wild rodent and small ground-mammal populations of the western, especially the southwestern, states. Modern medicine has for the most part successfully isolated the occasional outbreaks of plague, and yet the disease shows no signs of going away.⁸

Besides reaching the Western Hemisphere, the third pandemic gave occasion for the identification of the pathogen. In the years preceding its outbreak, the new science of microbiology had taken hold, most famously in the rival French and German schools of Louis Pasteur in Paris and of Robert Koch in Berlin. When word of the outbreak of plague in 1894 at Hong Kong spread, Shibasaburo Kitasato of Tokyo, a student of Koch, rushed to the scene, as did Alexandre Yersin, a Pasteur student who was then working in French Indochina. An intensely competitive race ensued. Although Kitasato was the first to claim victory, the scientific community eventually awarded that claim to Yersin. The bacillus he isolated and described was duly named *Yersinia pestis*. Between 1894 and 1897 Yersin developed the first anti-plague serum for vaccinations, and

⁷ Horrox, *Black Death*; Biraben, *Les Hommes et la peste*; Dols, *Black Death in the Middle East*.

⁸ Benedict, *Bubonic Plague in Nineteenth-Century China*; Link, *History of Plague in the United States*.

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by 1898 his colleague Paul-Louis Simond had unraveled the nexus of bacilli, fleas, and rats while doing research in Bombay.⁹ He found the chief vector of *Yersinia* to be a flea, *Xenopsylla cheopis*, whose preferred hosts in turn were rats, either *Rattus rattus*, the common stay-at-home black rat, or *Rattus norvegicus*, the sea-going brown wharf rat. Contrary to the long-held assumption that plague is a contagious disease, it is most commonly by the bite of a rat flea that the highly toxic substance gets injected into a human being and drains into a lymph node. Multiplying rapidly, it there forms the painful swelling known as a bubo. Once fatal to slightly more than half the people who contracted it, plague in recent decades has become routinely curable, if timely diagnosis and medical supplies permit, preferably by streptomycin, gentamycin, cloramphenicol, or tetracycline.¹⁰

Can we be certain that the same disease was at play in all three pandemics? Or, to be more precise, can we be certain that *Y. pestis* was the causal agent of either or both of the first two, pre-microbiology pandemics? This question rarely came up at all during most of the twentieth century. Medical experts in the years around 1900, starting with Yersin himself in the very paper of 1894 in which he announced his discovery, declared that both the Black Death and the earlier pandemic were caused by the same plague bacillus as the one they could see under their microscopes. To make such historical assertions, they had not scrambled to become historians overnight. Instead, they were merely drawing on their secondary-school learning in ancient and medieval history, which had included some of the major descriptions of those earlier pandemics. Thus the authority they gained from using the new science to identify the pathogen during the third pandemic carried over sufficiently to validate as well their readings of historical texts concerning the first two. Only in recent years have some historians criticized those judgments and their unquestioning perpetuation by other historians throughout the intervening century.¹¹ Yet also very recently, a completely new approach to these issues has been developing. It is the work not of historians but, as in 1894, of microbiologists, the heirs of Yersin and Kitasato, who now, redefined as molecular biologists, are extending their use of DNA analysis from the present and immediate past to the very remote past. Paleopathology is

⁹ Brocke, *Robert Koch*; Debré, *Louis Pasteur*; Mollaret and Brossollet, *Alexandre Yersin*.

¹⁰ Dennis et al., *Plague Manual*, 11–41.

¹¹ Twigg, *Black Death: A Biological Reappraisal*; Herlihy, *Black Death and the Transformation of the West*; and Cohn, *Black Death Transformed*; for the historical judgments made by both Yersin and Kitasato, *ibid.*, 8.

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[More information](#)

becoming an increasingly viable tool of research, a point to which we shall return.¹²

THE EVIDENCE

Notwithstanding these promising laboratory developments, written sources remain the preeminent tool of historians. The principal sources available for studying the Plague of Justinian are written in four languages: Syriac, Arabic, Greek, and Latin. The lengthiest account in any language, found in the *Ecclesiastical History* of John of Ephesus, was written in Syriac. By an astonishing set of circumstances, he was completing a mission from Constantinople to Alexandria at the time the plague arrived in Egypt. Upon his return trip overland through Palestine, Syria, and Asia Minor, he found himself keeping abreast of the parallel movement of the disease as he traveled. In Palestine he saw entire town populations wiped out. “During the tumult and intensity of the pestilence,” he wrote, “we journeyed from Syria to the capital. Day after day we, too, used to knock at the door of the grave along with everyone else. We used to think that if there would be evening, death would come upon us suddenly in the night. Although the next morning would come, we used to face the grave during the whole day as we looked at the devastated and moaning villages in these regions, and at corpses lying on the ground with no one to gather them.” According to John, some people carried corpses all day, while others spent the day digging graves. Houses and farms were abandoned. Animals forgot their domestication. “Crops of wheat in fertile fields located in all the regions through which we passed from Syria up through Thrace, were white and standing but there was no one to reap them and store the wheat. Vineyards, whose picking season came and went, shed their leaves, since winter was severe, but kept their fruits hanging on their vines, and there was no one to pick them or press them.” In his *Lives of the Eastern Saints*, John reported on one monastery that buried eighty-four of its members who had died of the plague. Other Syriac writings contain details of later outbreaks in Iraq, Egypt, Syria, and Palestine, including the *Chronicle of Zuqnīn*, whose monastic author, in recounting the epidemic of 743–745, specified that the victims had swellings in the groin, the armpit, or the neck.¹³

¹² Drancourt et al., “Detection of 400-year-old *Yersinia pestis*.”

¹³ John of Ephesus, *Lives of the Eastern Saints* 17.1, p. 261; *CZ*, pp. 95, 174. Most of John’s *Ecclesiastical History* is incorporated in the *CZ*.

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The situation with Arabic sources is altogether different. To begin with, written Arabic was still very rare in the sixth century. Moreover, the Arabian Peninsula itself seems to have escaped this plague pandemic. But already in the sixth year of the Islamic era, corresponding to 627–628 AD, Arabic sources do contain a number of references to an outbreak of plague that devastated Sasanian Iraq; they call it the Plague of Sharawaygh for the Sasanian ruler it killed along with many inhabitants of Ctesiphon, the capital city. Then, after the death of Mohammed in 632 and the consolidation of power within Arabia under the first caliph, the Arabs went on the offensive in Syria, Palestine, and Iraq. With the conquest of Syria virtually complete by 638, the Arabs were beset for the first time with a major epidemic, this one named the Plague of Anwas (for a village where they first encountered it).

These earliest Arabic testimonies concerning plague have not come to us directly from the seventh century. Later scholars, especially some located in Basra, refashioned them and incorporated them into larger, more systematic works, including plague chronologies and consolation treatises. The first of these included al-Asmai (died 862), a lexicographer who compiled a list of plague epidemics with their dates and their assigned names. Another was the historian al-Madaini (died 840), who worked independently of al-Asmai, although probably with common sources, and who provided considerable detail on the effects of the epidemics that struck Basra. And to mention just one more Basran scholar, al-Mubarrad (died in 899 or 900) wrote one of the earliest books of consolation, a type of work that told of the terrible encounters of Muslims with past epidemics, whether victims or survivors, to bolster the courage of present-day and future believers in confronting this dreadful scourge. But in the case of this writer and his book, we encounter another level of the complexity in untangling the Arabic sources dealing with the first plague pandemic, for this work is mainly known from those portions of it incorporated into the plague treatises that began to appear in the 1360s in the wake of the Black Death. Thus the earliest extant writings on the plague in Arabic, whether lists of epidemics or treatises, date from the ninth and later centuries, while of course referring back to works – now lost – of the seventh and eighth centuries.¹⁴

The principal Greek source is the work of the historian Procopius of Caesarea, who was present at the court of Justinian in Constantinople in the early 540s. In his *Persian War*, Procopius says with reference to this time, “there was a pestilence by which the whole human race came

¹⁴ Conrad, “Arabic Plague Chronologies and Treatises,” 52–70.

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near to being annihilated. . . . It started among the Egyptians. Then it moved to Palestine and from there spread over the whole world. . . . In the second year it reached Byzantium in the middle of the spring.” He says that for the majority of those stricken the onset of fever was the first sign, and then there developed after a few days a bubonic swelling, either in the groin, in the armpit, or beside the ears. He reports that the mortality rose alarmingly, eventually reaching more than ten thousand each day. Procopius also mentions that the emperor himself was taken ill, but only in his *Secret History* did he go on to reveal that there were rumors at court that Justinian had died and that speculation about the succession flourished. Justinian, however, recovered and reigned for two more decades.¹⁵

The lawyer Agathias undertook to continue the history of Procopius. He says that after 544 when plague ceased in Constantinople, it had never really stopped but simply moved on from place to place, until it returned to the city almost as though it had been cheated on the first occasion into a needlessly hasty departure. This was the spring of 558, when “a second outbreak of plague swept the capital, destroying a vast number of people.” The form the epidemic took was not unlike that of the earlier outbreak. A swelling in the glands in the groin was accompanied by a high fever that raged night and day with unabated intensity and never left its victim until the moment of death.¹⁶

Another testimony in Greek came from the Antiochene lawyer Evagrius “Scholasticus.” Plague broke out in 594 while he was at work on his *Ecclesiastical History*, and in a passage of that book he notes that this was the fourth episode of the plague in his experience, going back to 542 when the disease first arrived in Antioch and he himself, then six years old, suffered from its fevers and swellings. In each of the later outbreaks he lost servants and family members, including most recently a daughter and a grandson.¹⁷ We need emphasize that all three of these leading Greek sources, Procopius, Agathias, and Evagrius, were knowledgeable about earlier epidemics, yet clearly stressed the dreadful newness of the epidemics that started in 542.¹⁸

Of the Latin writers on this pandemic, Gregory of Tours (539–594) had the most to say. A native of Clermont and descendant of a Gallo-Roman family proud of its senatorial rank, he served as bishop of

¹⁵ Procopius, *PW* 2.22–23, pp. 451–73; *SH* 4.1, 18.44, pp. 42–43, 226–27.

¹⁶ Agathias, *The Histories* 5.3, 10, pp. 37–41, 145–46.

¹⁷ Evagrius, “Evagre, *Histoire ecclésiastique*” 4.29, pp. 389–92; Allen, *Evagrius Scholasticus*, 190–94.

¹⁸ Patlagean, *Pauvreté économique*, 87.

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[More information](#)

Tours from 573 to 594. In his *History of the Franks* and also in his *Lives of the Fathers*, he gives testimony to the first appearance of the plague in Gaul, which took place in the Rhone Valley in 543. The context was his telling of the saintly life of his uncle, Bishop Gallus of Clermont, in whose time, he says, “that illness called inguinal raged in many regions and most notably it depopulated the province of Arles.” Gallus prayed that his diocese be spared and the Angel of the Lord came to him in a vision to assure him that his prayers would protect his people. Thus assured, Gallus led his people in various forms of devotion and indeed not a single one of them at Clermont died of the plague.¹⁹

Things went differently at Clermont in 571 under Bishop Cautinus, who scurried from one place to another to avoid the plague. “So many people were killed off in the whole region and the dead bodies were so numerous that it was not even possible to count them. There was such a shortage of coffins and tombstones that ten or more bodies were buried in the same grave. In St. Peter’s church alone on a single Sunday three hundred dead bodies were counted.” Gregory describes the sore “like a snake’s bite” that appeared in a victim’s groin or armpit, leading to death a few days later. He finishes off the paragraph by saying that Bishop Cautinus came back to Clermont, got the infection, and died on Good Friday, “on the same day and at the same hour as his cousin Tetradius. Lyons, Bourges, Chalons-sur-Saône, and Dijon were decimated by this plague.”²⁰

Gregory’s references to plague in northern Gaul extend to Reims, which was protected miraculously by a relic of St. Rémi, and Trier, which was protected by the saintliness of Bishop Nicetius, but no further, while in the South these extend to Narbonne and Albi. His reference to the bishop of Nantes contracting plague suggests that the disease reached westward to the mouth of the Loire where it flows into the Atlantic. This in turn suggests that the probable route for the plague between Gaul and both Cornwall and Ireland was through Nantes, the port used in some instances by Irish monks in their travels to and from the Continent in the years around 600.²¹

¹⁹ Gregory of Tours, *Historia Francorum* 4.5, pp. 144–45 and *History of the Franks*, 199–200; idem, *Liber vitae patrum* 6.6, pp. 684–85 and *Life of the Fathers*, 39–40.

²⁰ Gregory of Tours, *Historia Francorum* 4.31, pp. 166–68 and *History of the Franks*, 224–27.

²¹ Gregory of Tours, *Liber in Gloria confessorum* 78, pp. 795–96 and *Glory of the Confessors*, 82–83; idem, *Liber vitae patrum* 17.4, p. 731 and *Life of the Fathers*, 110–11; idem, *Historia Francorum* 6.33, 6.15, pp. 274, 258–59 and *History of the Franks*, 364, 346–47. For the connection between Gaul and Ireland, see Wooding, *Communication and Commerce*, 64–68, 93–104. My thanks to Prof. Lisa Bitel for this reference.

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The port of entry for the disease into Gaul in the first place, we can assume, was Marseilles, since the earliest report we have of it in Gaul was in the Rhone Valley. While Gregory did not mention Marseilles in his passage on the outbreak of 543, he has an astonishing tale to tell of the one there in 588, astonishing for the bits of etiological insights it contains. “A ship from Spain put into port with the usual kind of cargo, unfortunately also with it the source of this infection. Quite a few of the townsfolk purchased objects from the cargo and in less than no time a house in which eight people lived was completely deserted, all the inhabitants having caught the disease. The infection did not spread through the residential quarter immediately. Some time passed and then, like a wheat field set on fire, the entire town was suddenly ablaze with the pestilence. . . . At the end of two months the plague burned itself out. The population returned to Marseilles, thinking to be safe. Then the disease started again and all who had come back died. On several occasions later on Marseilles suffered from an epidemic of this sort.”²²

The final epidemic written up by Gregory was that of the year 590 in Rome, as reported to him by a cleric named Agiulf whom he had sent to Rome to get saints’ relics for the church of Tours. In the closing months of 589, continuous rains caused the Tiber to flood much of the city, destroying many churches and, notably, the papal granaries. Agiulf told of countless serpents that came down the river, especially a giant dragon, and of how they all drowned. “As a result there followed an epidemic, which caused swellings in the groin. This started in January.” One of the first victims was Pope Pelagius II, and many others followed. The people of Rome turned to a deacon from one of the great senatorial families, who took the name of Gregory, the first pope to do so, and thus was born one of the most influential reigns in papal history, that of Gregory I, saint, Father of the Church, and surnamed “the Great” (590–604). Agiulf’s report contains what purports to be the text of a sermon given by the new pope about the plague, which he saw, not surprisingly, as divine punishment. Pope Gregory stressed the need for all to reflect upon and repent of their own sins because the deaths they were seeing about them every day were so sudden that they left no time for victims to put their lives in order. The Romans were being carried off not one by one but in droves. “Homes are left empty, parents are forced to attend the funerals of their children, their heirs march before them to the grave.” The sermon concludes with a plan for acts of penance and litanies and processions of supplication.

²² Gregory of Tours, *Historia Francorum* 9.22, p. 380 and *History of the Franks*, 510–11.