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## INTRODUCTION

# A FURIOUS BEGINNING

Roman soldiers surged south along the Euphrates River. After four years of indecisive battle, hostile Persia—the once unfailing bulwark against Rome’s eastern ambitions—finally yielded in the autumn of AD 165. The Roman legions pummeled Parthian defenses at the Syrian border city of Dura-Europos, opening the way for a march deep into the now exposed Persian heartland. But just eighty kilometers north of Babylon, the Roman advance halted. Standing sentinel were the twin cities of Ctesiphon and Seleucia—their riches ripe for looting. Seleucia likely felt the first blows. Founded by Alexander the Great’s general Seleucus in the late fourth century BC, the cosmopolis of perhaps four hundred thousand people enjoyed abundant wealth in trade due to the city’s privileged position along the canal that bridged the Euphrates and Tigris. Seleucia was a melting pot of Greek, Babylonian, and Persian cultures.<sup>1</sup> But the city’s doomed elite had no desire to endure a protracted Roman siege. Throwing open their gates, the Seleucians surrendered in the reasonable hopes of securing clemency. Forsaking mercy, however, Roman soldiers rampaged through the streets—pillaging, raping, and burning. After days, possibly weeks of impious barbarity, a jewel of the Hellenistic World was forever ruined. Rome’s military machine, as many times before, reversed centuries of civilization in a matter of days. It would not be the last time.

According to ancient accounts of the sack, untamed Roman bloodlust kindled divine ire. Along some Seleucian street stood a shrine of Apollo—god of light, averter of evil, bringer of pestilence. Apollo’s reputation for vengeance was as old as the classical world itself. In Greek literature’s opening act—Homer’s *Iliad*—Apollo inflicted a deadly plague upon an entire army because their commander, the brash Argive king Agamemnon, stole the daughter of one of Apollo’s priests.<sup>2</sup> It was thus well-established fact that Apollo’s fury was often disproportionately cataclysmic. Heedless of history’s warnings, however, Roman troops broke into Apollo’s holy sanctuary. Groping about for treasures, the soldiers smashed jars and pried open every nook and crevice. In their chaotic greed, the looters unsealed a nasty surprise—a deadly cloud of pestilence.<sup>3</sup> The soldiers breathed in the noxious air, unknowingly inaugurating a deadly plague that would decimate the entire Roman world. Furious Apollo, as always, received his vengeance in spades.

Although largely a fiction, the tale of the Romans’ desecration of Apollo’s Seleucian shrine survives in two separate ancient accounts. True, a disease undoubtedly infected Roman soldiers in Parthia. But other details—the violated shrine to be sure, but perhaps also even the specific legions and location—are part of a puzzling collection of sources which tell of widespread pestilence in the Roman Empire in the mid- to late second century AD. On the one hand, it seems the authors of that era wanted future readers to know that a serious disease afflicted their world. But a deeper message is embedded in what has survived. In the worldview of most Greek and Roman writers—from Homer to Procopius—disease was but a symptom of a far more corrosive and ancient malady: impiety. At the world’s mythical founding, for example, Pandora disregarded the gods and cracked open a forbidden jar of curses that plagued humanity for all time.<sup>4</sup> Many if not most ancient descriptions of disasters reflect this connection between sacrilege and catastrophe—emphasizing the divine portents that accompanied calamities more than all other aspects.<sup>5</sup> The story of the sack of Seleucia fits squarely in this tradition. It seems tailor-made to connect the unprecedented disease outbreaks of that age to impieties awful enough to

generate such sweeping sickness. Shrine desecration was among the most odious crimes against the gods. So too, however, was betrayal. The Roman commander at Seleucia, Avidius Cassius, would later break faith with his emperor Marcus Aurelius (AD 161–180). Cassius was, therefore, an obvious scapegoat for a pandemic which Roman writers otherwise could not explain.

The mystifying disease outbreak now known as the Antonine plague continues to puzzle to this day. Its influence on the fortunes of ancient civilizations remains one of the oldest unsolved mysteries in human history. Many nineteenth-century historians thought it a grand tragedy—an “unrecoverable blow” to the Roman Empire that left tens of millions dead.<sup>6</sup> But archaeological discoveries in subsequent decades yielded little proof of a calamitous empire-wide plague under Marcus Aurelius. As a result, serious doubts about the authenticity of ancient accounts emerged by the 1960s and 1970s.<sup>7</sup> It seemed the Antonine plague was largely a non-event in Roman history.

But scholarly opinion began to swing back toward plague maximalism after a physician and ancient historian revisited descriptions of the disease in ancient medical texts and diagnosed the Antonine plague pathogen as smallpox—a disease that killed around one-third of its victims.<sup>8</sup> Later, a pivotal article in the *Journal of Roman Archaeology* directly connected a wide range of evidence for concurrent economic and social crisis to the Antonine plague.<sup>9</sup> By the 1990s, the Antonine plague regained its status as one of the deadliest biological events in human history *and* became a *deus ex machina* to explain Rome’s perplexing plummet following centuries of peace and prosperity. Now, in the wake of the SARS-CoV-2 pandemic, scholarly and popular interest in the Antonine plague has reached fever pitch.

But unlike history’s other momentous scourges, even the most fundamental aspects of the Antonine plague remain unknown. To call the outbreak a “plague” is questionable. Sure, “plague” can be a generic term for “epidemic.” But “plague” also implies *bubonic plague*, and historians still have no idea which pathogen (or pathogens) was responsible.<sup>10</sup> Many historians still favor a smallpox diagnosis, but this book will not presume such without evidence.<sup>11</sup> Instead “pox,” like “plague,” serves

merely as a generic placeholder for a pustular disease that still defies historians' efforts to uncover its secrets nearly two thousand years later. When did the outbreak begin and end? How fast and how far did the disease spread? How many people died? Did some populations in the Roman Empire have preexisting immunity? And did the Antonine plague rise to the status of a pandemic? If so, it would have been the world's first.<sup>12</sup> Despite arriving in a period and place with a relatively high survival rate of source material, the Antonine plague left behind surprisingly little direct evidence of its deadly presence. As a result, so few of these key questions have thus far been answered with much confidence.

The meager evidence that survives, furthermore, seems confusing and even contradictory. Some ancient accounts speak of the disease "slaughtering" armies and "destroying" cities; other Roman writers are strangely silent. Why is the source material so muddled? In the pre-industrial world, disease was a normal if not chronic aspect of daily life—a constant as sure as the seasons. The social significance of epidemics was far different in the Roman world as opposed to our own. SARS-CoV-2, the defining pestilence of our era—a virus that killed millions and prompted unprecedented public health interventions throughout much of the world for years—might have gone unnoticed in the Roman world, lost in the noise of deaths from malaria, tuberculosis, influenza, and thousands of other biological maladies. Disasters of all sorts—not just diseases but famines, earthquakes, floods, and volcanic eruptions—were, as ancient historian Jeffrey Toner observes, a "structural part of Roman life."<sup>13</sup> So when several ancient authors speak of truly catastrophic epidemic outbreaks, we should pay attention. *Something* significant must have risen above day-to-day preindustrial misery and mortality. And the cluster of sources around the Antonine plague is obvious—even if it is ill-defined.<sup>14</sup> We know that ancient authors indulged in the kinds of speculation and even outright fear-mongering now common to their modern counterparts in the corporate media. In the past as in the present: fear sells. In their relentless pursuit of status—a currency more valuable than gold in the Roman world—ancient authors decorated their accounts of disease outbreaks with ex-

aggerations meant to outdo those of their predecessors, especially the Greek father of history Thucydides's genre-defining tale of plague in Classical Athens's "Golden Age." Some Roman authors even played up plagues to cast aspersions upon political and social rivals. And so even as literary sources offer the most direct evidence of the Antonine plague's significance, such sources are also the most prone to preserve outright lies.

Worse, it is hardly obvious which sources should count as Antonine-plague evidence. Contemporary with the pandemic, for example, are vague references to sicknesses in personal letters, census records of vanishing villagers, inscriptions to gods and goddesses for health and safety, and even several mass graves. Such evidence *seems* to hint at serious disease outbreaks, while simultaneously *confirming* very little. The search for the Antonine plague's true story casts nets into the deepest parts of Roman history—material difficult to navigate, with many distracting dangers and false finds. Circumstantial evidence sings a siren song both alluring and perilous. Contemporary with the outbreak, major mining operations ceased, the output of stone quarries declined, emperors struggled to recruit soldiers, cities erupted in violence, regional officials persecuted Christians, and price inflation soared. The Antonine plague could have contributed to each and every one of these phenomena . . . or none of them. Compared to more recent and better-sourced pandemics, scholars identify the scope and scale of the Antonine plague mostly through its assumed echoes in proxies: inscriptions to Apollo, census documents, paleoclimatological data, real estate contracts, rental agreements, and fieldworker wages. If these proxies echo the effects of a pandemic, their signal is unfortunately distorted by unclear causality and muffled by time. To take just one example: Egyptian census reports show that numerous villages in the Nile Delta lost most of their inhabitants during the early years of the Antonine plague. In one village, 93 percent of citizens simply vanished.<sup>15</sup> We don't know if these inhabitants died of plague, or died of some other cause like starvation, or didn't even die at all but perhaps fled unpayable tax obligations or joined the revolts that proliferated in the area contemporary with the pestilence.<sup>16</sup> Before the disease arrived in Egypt, years of drought had

forced many villagers into the Nile Delta's marshes to forage for food. Untangling the layers of crisis in just one region is challenging enough, but multiple regions of the Roman Empire leave behind evidence of chaos at the time of the Antonine plague.

The pandemic swept through the Roman Empire at the twilight of its economic and military apex—a period historians have named the Pax Romana: the “Roman Peace.” The nearly two-hundred-year era lasted from the reign of Rome's first emperor, Augustus, in 31 BC through the lifetime of Marcus Aurelius, who died in AD 180. In the eyes of most commentators, both ancient and modern, the Pax Romana was a prosperous period—a golden age for Rome, of western civilization itself even. Surely it must have been? But some historians think Pax Romana a deceptive moniker—perhaps even pure propaganda.<sup>17</sup> For one thing, the age was hardly free from conflict. The peace of the Pax Romana was in fact quite narrowly conceived: it was the “peace” of unquestioned domination. The Roman senator Tacitus put it best: “they make a desert and they call it peace.”<sup>18</sup> The defining characteristic of the period was hardly an absence of violence but rather an absence of any meaningful limit on Rome's ability to make violence.

Still, when Marcus was made emperor in AD 161, Roman power had been unquestioned for as long as anyone could remember. Few suspected they were living through the death throes of the Pax Romana. The evidence, however, as this book will detail, was all around them. Why couldn't the reigning Roman elite perceive the end of their world order? Many no doubt saw what they wanted—looking to the superficial signs and symbols propagated by the Roman state. Marcus promoted himself as a wise and studious philosopher-king. And, for the first time in history, a second man shared the supreme power. Marcus's co-emperor was Lucius Verus (AD 161–169)—stylized as a young and charismatic military leader. The two men were bound by blood—formally adopted as brothers and united through Lucius's marriage to Marcus's daughter, Lucilla, when she was no older than fourteen. The territory Marcus and Lucius ruled was vast: roughly 7,500,000 square kilometers of land and sea—comparable to the size of the contiguous United States. And, apparently, it was not finished expanding. The Em-

pire seemed poised to absorb lands in both Persia in Asia and Germania in Europe. Beyond those broadening horizons, Rome's wider economic influence extended from sea to shining sea, from the Atlantic to the Indian Ocean.<sup>19</sup>

And yet, Marcus and Lucius had barely taken power before numerous regions of the Roman Empire plunged into crisis. We still don't know exactly why. Cassius Dio—a Roman senator who lived through the tumult of the late second and early third centuries AD—later realized he had witnessed a monumental transition. On the death of Marcus, the senator grieved an age that would never return: “our history now descends from a kingdom of gold to one of iron and rust.”<sup>20</sup> Dio's retrospective on the political events of his lifetime recounts, blow by blow, how feckless emperors, sycophantic senators, out-of-control soldiers, insurrectionists, and invaders each took turns pummeling sacred Roman institutions until, in the space of a generation, a once golden and glorious empire was mercilessly bludgeoned into a heap of slag.

Dio's report of the Pax Romana's death, however, is exaggerated. The senator had an ax to grind with Marcus's son and successor Commodus (AD 176–192).<sup>21</sup> Dio and other Roman writers portray Commodus as both detached and deranged—an emperor who allowed his patrimony to lapse into disorder and insurrection while he paraded in Roman arenas in the guise of a gladiator. Few modern historians fix the end of the Pax Romana on the very day Commodus ascended to the purple, but many agree that by the end of the troubled emperor's reign in the early 190s, if not before, Rome's historical path had taken a permanent turn. And there is no denying that the last quarter of the second century was transformative: key regions witnessed sustained foreign invasions, would-be emperors fought prolonged civil wars, the coinage was debased, and waves of social violence and bloody religious conflict swelled in previously peaceful cities. These disasters and more seemed to herald Rome's new normal: a Pax Romana in ruins.

The Roman Empire nevertheless plodded on for centuries following the Pax Romana's traumatic death. “Decline and fall” may offer a powerful narrative device for what followed, but the phrase is a gross oversimplification. Essential markers of a complex society endured: the Empire's



sizable and socially and economically stratified population, its cultural diversity, its general unification of various heterogenic institutions into a politically if not ideologically unified construct.<sup>22</sup> But the Empire had nevertheless changed forever. To borrow a term from ecologist Marten Scheffer, the Roman system entered a new “stability domain” by the third century AD if not earlier.<sup>23</sup> This new Roman Empire—heated in the economic stresses of the mid-second century, purged in the crucible of pestilence, and hammered in the accompanying crises of the decades that followed the late AD 160s—differed from its predecessor in numerous ways. The geography of prosperity in the west, for example, shifted away from central Italy and toward places like northern Africa and Britain. In northwest Africa especially, the crises of the late second and early third centuries—including the Antonine plague—barely register in the archaeological record.<sup>24</sup> The crises of the age, however, devastated Italy, Gaul, the Balkans, Asia Minor, and Egypt—regions crucial to the Pax Romana’s tributary economy. The patchwork Empire that survived the Antonine plague era was fundamentally less flexible, even brittle in some ways—a condition clarified in the upheavals of the tumultuous third century.

A major argument in this book is that such failures in Roman institutions channeled the course of the Antonine plague as much as the course of the plague damaged these same institutions. Dio’s “age of iron and rust” witnessed a multifaceted maelstrom of disease, food shortages, war, and localized environmental changes. As with large-scale shifts in any multicultural territorial empire, the changes that occurred during and after the Antonine plague were complicated and widely varying in their causes and effects, both short and long term. Even as a new and deadly contagion punctured the Empire’s porous borders, so too did foreign migrants. Disease killed Roman workers, but war and famine also stole untold lives. Nature played a key role in the chaos, but often on the regional or subregional level, and in ways tightly integrated with preindustrial political and economic realities. The Mediterranean Basin was (and still is) polka-dotted with microregions. Climate conditions in one Italian or Anatolian valley, for instance, might be vastly different than those of a hilltop just a few kilometers away.<sup>25</sup> Rome’s

roads and maritime infrastructure grafted together these diverse localities, but largely through a perplexing mixture of capricious state power, tributary demands, military might, family networks, and privileged business partnerships.<sup>26</sup> The Antonine plague was a crucial factor in the demise of the Pax Romana, but so too was Rome's preindustrial context.

The outbreak's direct effects—death and disease—were no doubt significant. Documented epidemic surges in Rome, Italy, and Asia Minor were sudden, severe, and disruptive. Many died—perhaps millions. But at least equally important, as the disease spread and endured—perhaps for a decade or more—the very notion of pandemic itself implanted into the collective consciousness of an entire empire. This social contagion perhaps represents the Antonine plague's most transformative power—a power derived from the disease's lingering presence as a threat both real and perceived, a disease that could strike anywhere in the known world, that killed and maimed bodies both individual and collective. The pandemic and its legacy stretched conceptual frameworks related to everything, from disease to the divine, in the minds of those who struggled to understand and cope with the rapid and comprehensive changes that took place before, during, and after the Pax Romana's curtain call.<sup>27</sup> Thus, as both fact and fable, the Antonine plague resonated throughout the Roman Empire and beyond.

This book, therefore, reflects the tangled evidence and ghostly legacy of what I believe was the world's first pandemic. It is an account which dwells on details, irregularities, and broader contexts of the source material—especially the preexisting stresses of the decade prior to the Antonine plague. This approach enables readers to better grasp the pandemic's true significance and meaning. The particularities and interactions among the evidence assembled here reveal some sensational surprises: the Roman Empire's connectivity was as much a liability as an asset in the face of a novel disease, the pandemic was less deadly in one place compared to another, and different causes, such as famine, war, or simply bad luck, could be just as influential on events as the pandemic itself.<sup>28</sup> Many of the charts in this book, for example, mark the year AD 165—the year our sources suggest the pandemic first struck Roman

cities. As the charts show, sometimes that date correlates with sudden changes in key proxies, but not always. So while this book acknowledges the pandemic's significant influence, it also accounts for its variability, social context, and unique historical circumstances.

The Antonine plague's history is much like a problem known to many parents of small children. How many times have I taken out a puzzle box only to find that pieces are missing and that the box also contains a frustrating bevy of bits from other puzzles, games, and Lego sets (and a half-eaten cracker for some reason). Not only are needed pieces hopelessly lost, but not all that survives in the puzzle box is relevant. The Antonine plague is such a conundrum, only writ large. This book looks long at each piece, with frequent glances at the emerging picture. Constructing a truly thorough account requires both the historian's traditional tool kit—source analysis, contextualization, synthesis, and so forth—and methods from the social sciences and environmental studies, sorting out not only what the Antonine plague was but also what it was not. Story by story and source by source, I invite readers to collaborate with me—to follow my research, yes, but also to draw their own conclusions. Even with so much of the puzzle still missing, my hope is that what follows in this book offers readers a trustworthy depiction of one of history's most impactful biological events.

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