

Monica H. Green
(Arizona State University)

The Migrations of Plague in Mongol Eurasia: Reading Genetics as History

Ninety percent of all strains of *Yersinia pestis* persisting in the world today evolved since the time of the Black Death, the mid-14th-century pandemic that, by all estimates, is deemed to be the largest mortality event in human history. In 2013, Cui *et al.* posited an “origin event,” a polytomy, that suddenly pushed *Y. pestis* (an organism at least 20K years old) into four new lineages. Two of those lineages are currently found only in Mongolia and Gansu Province. The other two have descendants scattered all over the world today. One is heavily represented in plague reservoirs in China and (in more derived forms) central Eurasia. The lineage directly involved in the Black Death as it struck Europe is now found on four of the world’s five inhabited continents.

The location and exact timing of this polytomy have never been precisely determined. Biolocation of modern isolates of *Y. pestis* closest to the polytomy suggest it occurred somewhere in western China. Molecular clock estimates place the event at some point between 1142 and 1339. In other words, the genetics evidence points emphatically to an origin in Mongol territory at the height of the Empire. This is surprising, of course, because there are hardly any references to human plague outbreaks in our main sources for Mongol history.

But plague is not normally a human disease. Hence, the absence of human awareness of a mounting zoonotic threat may not be surprising. This paper will address that discrepancy between biological inference and documentary evidence by carefully laying out the argument from genetics, and by re-examining our earliest written evidence for plague outbreaks in the 1330s and 1340s. The central problem with the genetics evidence is that it seems to show the transmission of certain strains of *Y. pestis* over vast distances in quite short periods of time. I will argue that, based on the current genetics evidence, there is reason to challenge traditional narratives of the geographic origin of the Black Death. We are still lacking both genetic data and clear documentary records for the presence of plague in China. But for the western Empire, the territory of the Ulus of Jochi and the Chubaniids, the likelihood is high that we may be near a point of clarity. The next phase of research must involve specialists in Mongol history.