Geophysical Research Abstracts
Vol. 19, EGU2017-10161, 2017
EGU General Assembly 2017

The climatic context of major plague outbreaks in late medieval England

Kathleen Pribyl
Climatic Research Unit, University of East Anglia, Norwich, UK (k.pribyl@uea.ac.uk)

The climatological triggers of major plague outbreaks in late medieval and early modern Europe remain unclear; recent studies have been inconclusive. Plague is primarily a rodent disease and due to the involvement of rodent hosts and insect vectors, the epidemiology of plague is complicated, but research on outbreaks in the Third Pandemic, which began in the late nineteenth century, has shown that in central and eastern Asia plague is linked to specific meteorological conditions. The disease adapts to a varied spectrum of ecological and climatological settings, which influence the development of plague waves, and due to Europe's geographical diversity, this paper focuses on one region, England, in its search for meteorological parameters contributing to plague outbreaks.

The study period of this paper is defined by the arrival of *Yersinia pestis* in the British Isles in 1348 and the end of the fifteenth century. During this time, England's population dynamics were mortality-driven due to recurrent epidemic disease; and public health measures, such as quarantining, had not yet been introduced, hence the influence of social factors on the formation of major plague waves was very limited. The geographical and temporal focus of this study allows for the combination of the series of English major plague outbreaks, verified in the original texts, with the high-quality climate reconstructions based on both documentary sources and proxy data available for this region. The detailed analysis of the mechanisms contributing to English plague waves presented in this paper, reveals a complex interplay of time-lag responses and concurrent conditions involving temperature and precipitation parameters.