MICHAEL WALTERS DOLS

The Black Death in the Middle East

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MICHAEL W. DOLS

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To my mother and father

PREFACE

When I began my work on the Black Death in the Middle East, Professor Richard Ettinghausen described my project with inimitable good humor as "a great undertaking!" The subject has indeed proved to be greater than I first imagined but not the morbid task that one might suppose. The result is this monograph, which sets out to recount and to explain an important phenomenon in medieval Islamic history: the drastic destruction of Middle Eastern population and the subsequent impoverishment of Muslim society by plague epidemics. The epidemics clearly began with the outbreak of the great pandemic or universal epidemic of plague in the mid-fourteenth century known as "the Black Death." It was undoubtedly the worst disaster that has ever befallen mankind. "Oh, happy posterity," wrote Petrarch of the Black Death in Florence, "who will not experience such abysmal woe and will look upon our testimony as a fable." The dimensions of the calamity challenge—almost defy—the imagination.

I know only too well that I have crossed the boundaries of many disciplines to tell the story of the Black Death in the Middle East. As the medical nature and the historical consequences of plague epidemics are complex, my indebtedness to others has been correspondingly great. It is a pleasure to express my gratitude to those who have given me their generous help during the lengthy preparation of this study. My thanks go first and foremost to Princeton University, its library, and the faculty of the Near Eastern Studies Department, especially Professors Philip K. Hitti, L. Carl Brown, Martin Dickson, Michel Mazzaoui, Roy Mottahedeh, and Andras Hamori. Among the community of scholars associated with Princeton, I am grateful for the assistance of Professors

Richard Ettinghausen, S. D. Goitein, and the late Bayard Dodge.

During my research in Egypt in 1969-1970, numerous men and institutions made my work there both profitable and enjoyable despite the political difficulties. I am particularly indebted to the following: Professors Sa'īd 'Āshour and Hassanien Rabie of Cairo University; Professor Ḥasan Ḥabishī of 'Ayn Shams University; the director and staff of the National Library; al-Azhar Mosque Library; Dr. 'Abd at-Tawwāb of the Egyptian Museum; the library and faculty of the American University in Cairo, especially Professor Adil Sulayman Gamal; the French Institute; and the German Institute, especially Professor Ulrich Haarmann. In addition, Dr. Harry Hoogstraal of the United States Naval Research Unit Number Three in Cairo and his staff, particularly Dr. Robert Maronpot, greatly aided me in understanding and interpreting the medical aspects of plague in the Middle East. Outside of Egypt, I wish to thank the 'Umayyad Mosque Library, Damascus, and the Süleymaniye Mosque Library, Istanbul, for permitting me to use their collections. With regard to the manuscripts in Istanbul, I am most appreciative of the help of Professor Joel Shinder, as well as his constant encouragement during the initial stages of my research.

My continued research on this topic was supported in 1973 and 1974 by faculty research grants from the California State University, Hayward. In 1974-1975 a fellowship from the American Research Center in Egypt gave me the opportunity to return to Cairo and to re-examine some of the manuscript material and make significant additions and corrections. Concurrently, a grant from the Joint Committee on the Near and Middle East of the American Council of Learned Societies and the Social Science Research Council enabled me to extend my work to other parts of the Middle East and Europe and to make a final revision of the monograph.

I am also pleased to acknowledge the generous assistance of various European libraries that allowed me access to their manuscript collections: the British Museum; Cambridge Univer-

sity Library; the Bodleian Library, Oxford; Staatsbibliothek, Berlin, West Germany; Universiteitsbibliotheek, Leiden; and the Library of San Lorenzo de El Escorial. I am particularly grateful to Dr. Jacqueline Sublet (Institut de Recherche et d'Histoire des Textes, Paris) for her help in dealing with the numerous difficulties of the oriental manuscript material. Yet any failure to locate relevant manuscripts is entirely my own. The interpretation of the Arabic sources is also clearly my own responsibility; because of the lack of previous study of a large part of this plague literature, I have been careful to document extensively my use of the sources.

Perhaps a few technical details should be mentioned here regarding the composition of the monograph. In the interests of brevity and economy, I have transliterated all Arabic citations. The system of Arabic transliteration follows that of the Library of Congress, with the single exception that the definite article preceding "sun letters" is transliterated as pronounced. Wherever an Arabic name or word has assumed a more familiar English form than in strict transliteration, such as Saladin for Ṣalāḥ ad-Dīn or Cairo for al-Qāhirah, I have adopted the former. Concerning dates of the Muslim calendar, I have designated their Christian equivalent in the text by placing the Muslim year first and then the Christian year, as in 852/1448-1449; otherwise a date refers to the Christian calendar. In the notes, Muslim dates are often cited as A.H., "anno hijrah." I should also explain that I have spelt *mamlūk* with a capital *M* when referring to the empire or period of hegemony in Egypt and Syria from 1250 to 1517; in all other instances, I have used a small *m*. Furthermore, parts of Chapters I and VIII of this book, in somewhat revised form, have appeared as articles in *The Journal of the American Oriental Society* and in *Viator: Medieval and Renaissance Studies* respectively.

Finally, I would like to express my profound thanks to those who have read all or part of the manuscript with great care, especially Professor Ira M. Lapidus, Professor Frank D. Gilliard, Dr. Richard S. Cooper, Mr. Steve Pellitiere, Mr. Nicholas L. Childs, Mrs. Mava Luther, and the late Muḥammad

Rashād 'Abd al-Muṭṭalib. I also wish to thank Princeton University Press, particularly Mr. Lewis Bateman, for his constant guidance and support, and Mrs. Arthur Sherwood, for her meticulous editorial assistance. My deepest obligation is to Professor Abraham L. Udovitch of Princeton University, who first suggested this study to me. I am indebted to him as well for his extraordinary patience, courtesy, and encouragement through all the stages of its composition.

MICHAEL WALTERS DOLS

San Francisco, 1975.

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ABBREVIATIONS

AGM	*Archiv für Geschichte der Medizin*, ed. by Karl Sudhoff, Leipzig, 1908 ff.
Annales	*Annales: économies, sociétés, civilisations*, Paris, 1946 ff.
Badhl	Ibn Ḥajar al-ʿAsqalānī, *Badhl al-māʿūn fī faḍl aṭ-ṭāʿūn*, Dār al-Kutub al-Miṣrīyah MS no. 2353 *taṣawwuf*
al-Bidāyah	Ibn Kathīr, *al-Bidāyah wan-nihāyah fī t-taʾrīḫ*, Cairo, n.d.
BIE	*Bulletin de l'Institut Égyptien*, Cairo, 1857 ff.
BIFAO	*Bulletin de l'Institut Français d'Archéologie Orientale*, Cairo, 1901 ff.
BSOAS	*Bulletin of the School of Oriental and African Studies*, London, 1917 ff.
Campbell	A. M. Campbell, *The Black Death and Men of Learning*, New York, 1931
Daf' an-niqmah	Ibn Abī Ḥajalah, *Daf' an-niqmah fī s-salāt ʿalā nabī ar-raḥmān*, Escorial MS no. 1772, fols. 1a-87b
Darrag	Aḥmad Darrag, *L'Égypte sous le règne de Barsbay 825-841/1422-1438*, Damascus, 1961
Durrat al-aslāk	Ibn Ḥabīb, *Durrat al-aslāk fī dawlat (mulk) al-atrāk*, Cairo University Library, photocopy no. 22961
EI[1]	*The Encyclopaedia of Islam*, 4 vols., Leiden-London, 1913-1934
EI[2]	*The Encyclopaedia of Islam*, new ed., Leiden-London, 1960-

"England to Egypt"	Robert Lopez, H. Miskimin and A. Udovitch, "England to Egypt, 1350-1500: Long-Term Trends and Long-Distance Trade," *Studies in the Economic History of the Middle East*, London, 1970, ed. by Michael A. Cook, pp. 93-128
Études et Travaux	*Études et Travaux de Centre d'Archéologie Méditerranéenne de l'Académie Polonaise des Sciences*, Warsaw, 1957 ff.
GAL	Carl Brockelmann, *Geschichte der Arabischen Litteratur*, 2 vols., 2nd ed. (Leiden, 1945-1949); *Supplement*, 3 vols. (Leiden, 1937-1942)
GAS	Fuat Sezgin, *Geschichte des Arabischen Schrifttums*, 3 vols. (Leiden, 1967-1971)
"La Grande Peste Noire"	Gaston Wiet, "La Grande Peste Noire en Syrie et en Égypte," *Études d'orientalisme dédiées à la mémoire de Lévi-Provençal*, vol. 1 (Paris, 1962), pp. 367-384
Hirst	L. Fabian Hirst, *The Conquest of Plague: A Study of the Evolution of Epidemiology*, Oxford, 1953
Ibn Iyās	Ibn Iyās, *Badā'iʿ az-zuhūr fī waqā'iʿ ad-duhūr*, 2 vols., Būlāq, A.H. 1311-1312
IJMES	*International Journal of Middle East Studies*, Cambridge, 1970 ff.
'Iqd al-jumān	al-'Aynī, *'Iqd al-jumān fī ta'rīḫ ahl az-zamān*, Dār al-Kutub al-Miṣrīyah MS no. 1574 *ta'rīḫ*
JA	*Journal Asiatique*, Paris, 1822 ff.
JAOS	*Journal of the American Oriental Society*, Baltimore, 1843 ff.
JESHO	*Journal of Economic and Social History of the Orient*, Paris, 1957 ff.
JRAS	*Journal of the Royal Asiatic Society*, London, 1834 ff.

al-Khiṭaṭ	al-Maqrīzī, *al-Mawāʿiẓ wal-iʿtibār bi-dhikr al-ḫiṭaṭ wal-athār*, 2 vols., Būlāq, 1854
Kitāb aṭ-ṭibb	Ibn Abī Ḥajalah, *Kitāb aṭ-ṭibb al-masnūn fī daf' aṭ-ṭāʿūn*, Dār al-Kutub al-Miṣrīyah MS no. 102 *majāmīʿ m*, fols. 141a-146a
Kunūz adh-dhahab	Sibṭ ibn al-ʿAjamī, *Kunūz adh-dhahab fī taʾrīḫ Ḥalab (Les Tresors d'Or)*, trans. by Jean Sauvaget, Beirut, 1950
Mā rawāhu l-wāʿūn	as-Suyūṭī, *Mā rawāhu l-wāʿūn fī aḫbār aṭ-ṭāʿūn*, ed. by Alfred von Kremer, "Ueber die grossen Seuchen des Orients nach arabischen Quellen," *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften (Philosophisch-Historische Classe)*, vol. 96, book 1 (Vienna, 1880), pp. 144-156
Muqniʿat	Ibn al-Khaṭīb, *Muqniʿat as-sāʾil ʿan al-maraḍ al-hāʾil*, Escorial MS no. 1785, fols. 39a-48b
Muslim Cities	Ira M. Lapidus, *Muslim Cities in the Later Middle Ages*, Cambridge, Mass., 1967
an-Nujūm	Ibn Taghrī Birdī, *an-Nujūm az-zāhirah fī mulūk Miṣr wal-Qāhirah*: (1) Cairo ed.: 16 vols., Cairo, 1929-1972 (2) Popper trans.: William Popper, *History of Egypt 1382-1469* A.D., *University of California Publications in Semitic Philology*, vols. 5-7, 13-14, 17-19, 22-23, 24 (indices), Berkeley and Los Angeles, 1915-1963
"The Plague and Its Effects"	David Neustadt (Ayalon), "The Plague and Its Effects upon the Mamlūk Army," *Journal of the Royal Asiatic Society*, 1946, pp. 67-73
REI	*Revue des Études Islamiques*, Paris, 1906 ff.
Risālat an-nabaʾ	Ibn al-Wardī, *Risālat an-nabaʾ ʿan al-wabaʾ*, ed. by F. ash-Shidyāq, *Majmūʿat al-jawāʾib*, Istanbul, A.H. 1300, pp. 184-188

Sublet	Jacqueline Sublet, "La Peste prise aux rêts de la jurisprudence: Le Traité d'Ibn Ḥağar al-'Asqalānī sur la peste," *Studia Islamica*, vol. 33 (Paris, 1971), pp. 141-149
as-Sulūḳ	al-Maqrīzī, *as-Sulūḳ li-ma'riſat duwal al-mulūḳ*, 4 parts in 12 vols., Cairo, 1936-1958, 1970-1973
Systematic Notes	William Popper, *Egypt and Syria Under the Circassian Sultans, 1382-1468* A.D.*; Systematic Notes to Ibn Taghrī Birdī's Chronicles of Egypt, University of California Publications in Semitic Philology*, vols. 15-16, Berkeley and Los Angeles, 1955, 1957
Taḥṣīl	Ibn Khātimah, *Taḥṣīl al-gharaḍ al-qāṣid fī tafṣīl al-maraḍ al-wāfid*, Escorial MS no. 1785, fols. 49a-105b
Ṭāshköprüzāde	Ṭāshköprüzāde, *Maǰmū'at ash-shifā' li-adwiyat al-wabā' ma' rasā'il lil-Bisṭāmī*, Berlin MS Landberg no. 999 (Ahlwardt no. 6378)
"Ueber die grossen Seuchen"	Alfred von Kremer, "Ueber die grossen Seuchen des Orients nach die arabischen Quellen," *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften (Philosophisch-Historische Classe)*, vol. 96, book 1 (Vienna, 1880), pp. 69-156
Ullmann	Manfred Ullmann, *Die Medizin im Islam*, Leiden, 1970
Ziegler	Philip Ziegler, *The Black Death*, London, 1969

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A history more worthy of the name
than the diffident speculations to
which we are reduced by the paucity
of our material would give space
to the vicissitudes of the human
organism. It is very naive to claim
to understand men without knowing
what sort of health they enjoyed.

Marc Bloch, *Feudal Society*
trans. by L. A. Manyon
(Chicago, 1964), vol. 1, p. 72

I

INTRODUCTION

In the middle of the fourteenth century a devastating pandemic of plague, familiarly known in European history as "the Black Death," swept westward over the Eurasian continent. While a controversy will always exist over the precise degree of depopulation caused by the disease, the mortality rate was indeed extraordinary. The historical importance of this sudden decline of population has been appreciated by European historians since the nineteenth century, and there can now be little doubt that it had a marked effect on late medieval European society.[1] The Black Death is, perhaps, our most forceful reminder that the history of epidemic disease must form an inseparable part of the history of mankind.

The European phase of the Black Death raises a number of pertinent questions about its comparable role in medieval Muslim society. Despite the existence of relevant historical material, there has been no general examination of the Black Death in the predominantly Muslim countries of the Middle East. This study, based on Arabic sources, therefore, attempts to establish the chronology and geographical distribution of the plague pandemic in this region in the mid-fourteenth century and to describe its impact upon Muslim society.[2]

[1] The extensive literature on the Black Death in Europe, with special attention usually being given to Great Britain, has been conveniently summarized by four recent surveys. *The Black Death* by Ziegler is a particularly good, concise account that includes a helpful bibliography. The three other studies are: George Deaux, *The Black Death 1347* (London, 1969); J.F.D. Shrewsbury, *A History of Bubonic Plague in the British Isles* (Cambridge, 1970); and Geoffrey Marks, *The Medieval Plague* (New York, 1971).

[2] The restriction of this study to primarily Arabic sources precluded intensive research in Turkish, Persian, and Chinese literature. These areas are touched upon with regard to the transmission of the Black

Moreover, the Black Death initiated a series of plague recurrences that substantially reduced Middle Eastern population. This prolonged reduction of population was the fundamental event in the social and economic history of Egypt and Syria during the later Middle Ages.

The present investigation has, then, somewhat betrayed its title not only by chronicling the occurrence of the Black Death but by considering the effects of the recurrent plague epidemics which began with the Black Death. Attention has been focused on the reappearances of plague during approximately the following one hundred and fifty years. Documentation of these epidemics shows that plague recurred in cycles, as in Europe. But unlike the European experience of plague, the recurrences in the Middle East had a far more damaging effect on population—a cumulative effect far greater than that of the Black Death itself.

Many of the more detailed treatises on plague and the informative historical reports of plague epidemics date from these recurrences after the Black Death.[3] None of the Arabic sources, however, refers to the first appearance of plague in the middle of the fourteenth century as "the Black Death," nor

---

Death through the Middle East. There is, however, considerable material for the study of later plague epidemics in the Ottoman Period. For the Turkish sources, one should begin with two papers presented at the Ninth International Congress of the History of Medicine (Bucharest, September, 1932), *Comptes-Rendus* edited by Victor Gomoin and Victorica Gomoin: Galip Ata, "Évolution de la médicine en turquie," pp. 95-131, and especially A. Süheyl Ünver, "Sur l'histoire de la peste en Turquie," pp. 479-483. (See Appendix 3 for plague treatises for the Ottoman Period.) For Persia, a point of departure is J.-D. Tholozan, *Histoire de la peste bubonique en Perse* (Paris, 1874). Another major area of source material that, unfortunately, had to be excluded is the Arabic Christian literature, particularly the Coptic sources from Egypt. Let us hope that further research will investigate this rich source, which might add important comparative data with regard to Muslim and Christian responses to plague as well as chronological and demographic information.

[3] See Appendix 3.

was this pseudonym used by medieval European chroniclers.[4] The genesis of the name is a minor mystery, but it may be due to the over-literal translation into European languages of the Latin *pestis atra* or *atra mors* in the sixteenth and seventeenth centuries.[5] The name has been retained here because it has

[4] To my knowledge, the only Oriental use of such an expression related to plague or to disease in general is the Persian term *ḳarakḫalak*: "According to the communication of N. I. Khodukin, haemorrhagic fever has also been known to the indigenous population of other districts of Uzbekhistan apparently over a fairly long period, since there exists a definite name for it: *ḳarakḫaluḳ* (Black Death). This term, the author notes, is sometimes confused with the term for plague, but not with malaria which bears the name *ḳizdyrma*." (S. Ye. Shapiro and Z. S. Barkagan, "History of Haemorrhagic Fever in Central Asia," *Voprosy Virusologii* [in Russian], vol. 5, no. 2 [Moscow, 1960], p. 245.)

[5] The contemporary Latin chroniclers designated the pandemic as "the Great Mortality," "the Great Pestilence," "the Plague of Florence," and so forth (see Ziegler, pp. 17-18; F. A. Gasquet, *The Black Death of 1348 and 1349* [London, 1908], pp. 7-8; Hirst, p. 32; Shrewsbury, *A History of Bubonic Plague*, p. 37; and especially Stephen d'Irsay, "Notes to the Origin of the Expression 'arta mors,'" *Isis*, vol. 8 [1926], pp. 328-332). The Muslim witnesses referred to the pandemic as: (1) "the Universal Plague" (*at-ṭā'ūn al-'ām: Badhl*, fol. 123b; Ibn Hajar al-'Asqalānī, *ad-Durar al-ḳāminah* [Hyderabad, 1348-1350 A.H.], vol. 3, pp. 192, 382; *'Iqd al-jumān*, chap. 24, part 1, fol. 85; *Durrat al-aslāḳ*, p. 358; *Mā rawāhu l-wā'ūn*, p. 155; adh-Dhahabī and al-Ḥusaynī, *Min dhuyūl al-'ibar* [Kuwait, n.d.], p. 270); (2) "the Plague of the Kindred" (*ṭā'ūn al-ansāb: Durrat al-aslāḳ*, p. 358; *idem, Tadhkirat an-nabīh fī ayyām al-Manṣūr wa banīh*, British Museum Or. Add. MS no. 7335, fol. 145b; *Risālat an-naba'*, p. 186; *Kunūz adh-dhahab*, vol. 2, p. 10); (3) "the Great Destruction" (*al-fanā' al-ḳabīr: al-Khiṭaṭ*, vol. 1, p. 637; *'Iqd al-jumān*, chap. 24, part 1, p. 85; also *fanā' 'aẓīm biṭ-ṭā'ūn*: Sālih ibn Yahyā, *Ta'rīḫ Bayrūt*, 2nd ed. [Beirut, 1927], p. 140; *al-fanā' al-'aẓīm*: Ibn Ḥabīb, *Tadhkirat an-nabīh*, fol. 144b; *an-Nujūm*, Cairo ed., vol. 10, p. 233); (4) "the Great Plague" (*at-ṭā'ūn al-'aẓīm*: al-Mu'minī, *Kitāb futūḥ an-naṣr min ta'rīḫ mulūḳ Miṣr*, Dār al-Kutub al-Miṣrīyah MS no. 2399 *ta'rīḫ*, vol. 2, fol. 295); (5) "the Great Pestilence" (*al-wabā' al-'aẓīm: an-Nujūm*, Cairo ed., vol. 10, p. 211); (6) "the Violent Plague" (*at-ṭa'ūn al-jārif*: al-Qalqashandī, *Ṣubḥ al-a'shā* [Cairo, 1914-1928], vol. 13, p. 79; Ibn Khaldūn, *at-Ta'rīf* [Cairo, 1951], p. 19); or (7) "the Year of the Annihilation" (*sanat al-fanā': an-Nujūm*, Cairo ed., vol. 10, p. 211). These examples refer to the Black Death as a proper noun; for the common substantives for plague, see Appendix 2.

become the accepted historical term for the pandemic. It also serves to emphasize the universal nature of the disease.

Geographically, the study could not be neatly limited to the "Middle East"—also an awkward Western term. My investigation of all the possible Arabic sources dealing with plague has led me far afield to the three important plague tracts written in Andalusia during the time of the Black Death, which are particularly informative about contemporary medical practice in Muslim society. While concentrating on the pandemic in the Middle East, I have tried to survey the entire field in order to form a comprehensive framework for further research.

Despite the wide geographical and temporal ranges of this study, most of the pertinent historical material that has survived centers on the Mamlūk Sultanate of Egypt and Syria from the outbreak of the Black Death in 1347 to the middle of the fifteenth century. Although the source material for the Mamlūk Period (1250-1517) is relatively abundant and allows us to concentrate on this area, the general history of the period has been sorely neglected.[6] Recent scholarship has been devoted

[6] The following works in western languages are devoted in their entirety or in part to the general history of the Mamlūk Sultanate: Stanley Lane-Poole, *A History of Egypt in the Middle Ages* (London, 1968 reprint), pp. 242-357, the standard account of the period; John B. Glubb, *Soldiers of Fortune: the Story of the Mamlukes* (London, 1973), a poor popularization of the period with an emphasis on military history; Bernard Lewis, "Egypt and Syria" in *The Cambridge History of Islam*, ed. by P. M. Holt, A.K.S. Lambton, and B. Lewis (Cambridge, 1970), vol. 1, pp. 201-230; Wolfgang Niemeyer, *Ägypten zur Zeit der Mamluken* (Berlin, 1936), a geopolitical study based on secondary sources; Maurice Gaudefroy-Demombynes, *La Syrie au début de quinzième siècle* (Paris, 1923), prefaced by an excellent introductory survey; Sir William Muir, *The Mameluke or Slave Dynasty of Egypt, 1260-1517* (London, 1896), an outdated political history; Gaston Wiet, *L'Égypte Arabe de la conquête Arabe à la conquête Ottomane, 642-1517 de l'ère Chrétienne* in the collective work, *Histoire de la nation Égyptienne*, ed. by Gabriel Hanotaux, vol. 4 (Paris, 1937), pp. 387-636, comparable to Lane-Poole's account but lacking a bibliography; A. N. Poliak, *Feudalism in Egypt, Syria, Palestine, and the Lebanon, 1250-1900* (London, 1939); J. J. Saunders, *Aspects of the Crusades* (Christchurch, New Zealand, 1962), a good survey of the political circumstances of the Middle

largely to historiography, economic and urban history, and the mamlūk army. In such broad areas as literary, religious, social, agrarian, demographic, and art history, much work remains to be done.

Thus, it is not surprising that the Black Death in the Orient has attracted so little scholarly attention. Furthermore, the historical studies of plague in the Middle East by nineteenth-century scholars reveal that they were severely handicapped by their ignorance of the pathology of plague. This limited medical knowledge distorted their interpretations and partly accounts for their failure to distinguish among epidemic diseases.[7] The modern examination of the Black Death from the Arabic sources has been cursory: Gaston Wiet has trans-

East at the time of the mamlūk ascendancy in Egypt and Syria; Lapidus, *Muslim Cities*, a very valuable study of mamlūk urban history with an extensive bibliography; Popper, "Systematic Notes to Ibn Taghrī Birdī's Chronicles of Egypt," an excellent survey of the geography of the Mamlūk Empire and the government; Bertold Spuler, *The Muslim World; an Historical Survey*, vol. 2: *The Mongol Period*, trans. by F.R.C. Bagley (Leiden, 1960) places Mamlūk Egypt and Syria within the context of the general political history of the rest of the Middle East; Mustafa M. Ziada, "The Mamlūk Sultans to 1293" and "The Mamlūk Sultans, 1291-1517," *A History of the Crusades*, ed. by Kenneth Setton, vol. 2 (Madison, 1969), pp. 735-758 and vol. 3 (Madison, 1975), pp. 483-512; *EI*[1]: "mamlūks" (M. Soberheim); Ibn Khaldūn, *The Muqaddimah*, trans. by Franz Rosenthal, 3 vols. (Princeton, 1967), an invaluable source for the social and intellectual history of fourteenth-century Egypt; Hassanein M. Rabie, *The Financial System of Egypt* A.H. *564-741*/A.D. *1169-1341* (Oxford, 1972), a convenient summary of the financial administration; and the important articles of David Ayalon (Neustadt) primarily on the mamlūk army, see the Bibliography. For additional works on the Mamlūk Period, see Jean Sauvaget, *Introduction to the History of the Muslim East: A Bibliographical Guide*, ed. by Claude Cahen, trans. by von Grunebaum and Little (Berkeley and Los Angeles, 1965), pp. 176-183.

[7] See C. J. Lorinser, *Die Pest des Orient* (Berlin, 1837); "Ueber die grossen Seuchen," pp. 69-143 and the treatment of plague in von Kremer's *Culturgeschichte der Orients unter den Chalifen* (Vienna, 1877), vol. 2, pp. 489-493; G. Sticker, *Abhandlungen aus der Seuchengeschichte und Seuchenlehre*, vol. 1: *Die Pest* (Giessen, 1908), which relies heavily on von Kremer's work; and Enrico di Wolmar, *Abhandlungen über die Pest* (Berlin, 1827).

lated the most important (though not contemporary) historical text dealing with it in Egypt and Syria;[8] David Ayalon (Neustadt) has demonstrated the effects of recurrent plague epidemics on the mamlūk army;[9] and Abraham Udovitch has considered plague as a significant cause of the economic decline of Mamlūk Egypt.[10] Most recently, the Islamic legal principles regarding plague have been investigated, using the comprehensive Arabic plague treatise, *Badhl al-māʿūn fī faḍl aṭ-ṭāʿūn*, by Ibn Ḥajar al-ʿAsqalānī (d. 852/1449).[11] Beyond this, nothing has been accomplished.[12]

Because the Muslims of the fourteenth and fifteenth centuries largely adopted the earlier religious and medical traditions concerning plague, I have begun by tracing briefly the previous history of plague in the Middle East from the Muslim conquests of the seventh century. Muslims of the later Middle Ages relied upon the previously established interpretations of the disease, Arabic terminology, plague symptomatology, and methods of prevention and treatment. The succession of plague epidemics in early Islamic history also poses the question of whether plague was endemic in the Middle East immediately before the Black Death.

As for the advent of the Black Death itself, most of the modern accounts of the pandemic in Europe begin by placing its origin rather indistinctly in the Orient and proceed quickly to its introduction into Sicily and Italy. Therefore, considerable attention has been paid to the transmission of plague from Central Asia through the Middle East, North Africa, and

[8] "La Grande Peste Noire en Syrie et en Égypte."

[9] "The Plague and Its Effects upon the Mamlūk Army."

[10] "England to Egypt," pp. 115-128.

[11] Sublet.

[12] Jean Marchika announced an exhaustive study of plague from the Black Death to modern times in his introduction to *La Peste en Afrique Septentrionale* (Algiers, 1927), p. 10. This thesis was to form only a part of the larger work; I have been unable to locate the author's proposed study.

Spain. A plague chronology and its geographical distribution have been determined, as well as the manner in which plague recurred in Muslim countries until the Ottoman conquest of Egypt in 1517.[13]

The nature and dissemination of the Black Death are no longer the gruesome mystery they were in the Middle Ages. Modern scientific research has disclosed the complex pathology of plague and set us comfortably apart from the past. It is essential, however, to summarize this knowledge in order to understand the medieval observations of the disease and to determine the existence of the various forms of plague. With an appropriate medical background, we can more fully appreciate the historical riddle of plague and the diverse medical explanations that persisted until the discovery of the plague bacillus, *Pasteurella pestis*, at the end of the nineteenth century and the subsequent establishment of plague pathology.

Without this knowledge, Muslims were no better equipped than others of their time to deal effectively with this disease; their desperately devised defenses form a major theme of the present inquiry. These defenses may be seen most vividly in the confusing medical explanations of the disease and in the futile attempts at prevention and treatment. More fundamental and perhaps more effective was the spiritual defense which the Muslims sought to formulate against this otherwise unaccountable scourge. The severe pandemic posed in acute form the basic theological problem of all Semitic religions: how to reconcile men's suffering with the justice and mercy of God. The abundant theological discussions in the plague treatises reflect the prevailing beliefs of contemporary Muslim scholars toward plague. In order to elucidate this literature and its religio-legal interpretations, I have chosen to analyze as representative the important plague treatise of Ibn Ḥajar al-'Asqalānī.

In one respect, Ibn Ḥajar's discussion of plague is atypical of the majority of Muslim treatises on plague. He argues against the predominant view that plague resulted from a

[13] See Appendix 1.

miasma or corruption of the air. Ibn Ḥajar believed that plague was inflicted on mankind by evil jinn or demons—a view not inconsistent with the Muslim belief that plague was sent directly by God. The plague-bearing jinn were simply agents of His design. This acceptable Muslim interpretation was the basis for a large number of superstitions and magical practices described in the plague treatises. Medically worthless, if not positively harmful, these measures of plague prevention and cure through exorcism are indicative of widespread popular belief in jinn and the efficacy of magic in the Middle Ages. As do the medical writings on the pestilence, the frequent advocacy of magic suggests that magical practices must have played an important part in the Muslim reaction to plague in the countryside and the major cities.

Regrettably, we have no Arabic equivalent of Boccaccio's *Decameron* that fully describes the responses of a Muslim community to the Black Death. Yet the actual reactions of specific communities, particularly Cairo and Damascus, have been fairly well documented by poets and historians, religious scholars and physicians. With the aid of supplementary information taken from later plague epidemics, we may arrive at a reasonably clear picture of the effects of the Black Death, especially in Egypt and Syria. In order for us to assess the consequences of the Black Death in these areas, I have attempted a very brief description of the political and social conditions of the Mamlūk Sultanate of Egypt and Syria before the Black Death. It would be an error to assume too great a familiarity by most readers with this period, although the specialist in medieval Islamic history may find this background unnecessary.

The immediate consequence of the pandemic was rural and urban depopulation, and this was recorded by Egyptian historians. While the medieval chronicles do not satisfy our curiosity about exact mortality figures, they indisputably document a significant decrease in general population. It is known that one class of urban society, the mamlūks, suffered severely from the Black Death. Since the mamlūks formed the

military and governmental élite, they warrant our special attention. For this ruling class, as for Muslim society in general, the Black Death and the recurrences of plague had a damaging cumulative effect. To substantiate this claim, I have endeavored to draw together all the available demographic information relating to the Black Death and the recurrent plague epidemics. In this matter, I have been conscious of the recent skepticism about the demographic importance of plague recurrences in late medieval Europe. However, there is good reason to suggest an appreciable and sustained decline in Middle Eastern population from the mid-fourteenth century largely due to plague.

Faced with the tragic spectacle of the massive human destruction caused by the Black Death, Muslim society responded. We are particularly well informed about urban activity during the calamity because most of the chroniclers were residents in the plague-stricken cities. In the midst of frightening circumstances, the people were organized in communal supplications for alleviating the affliction, and large-scale funeral services as well as processions out to the cemeteries were arranged.

For the survivors, the Black Death influenced the conditions of daily life by changing the prices of commodities and the level of salaries. It is especially in the economic sphere, such as in land values and commerce, that we can discern the long-term as well as the immediate adjustments to demographic decline. The historical and literary sources are replete with information about the immediate and dramatic economic and social effects of the Black Death on Muslim communities. Indeed, this affliction of mankind has provided a powerful literary theme for writers as diverse as Boccaccio and Defoe, Hesse and Camus.[14]

These writers have employed the historical occurrences of

[14] Giovanni Boccaccio, *Decameron*, Florence, 1960; Daniel Defoe, *A Journal of the Plague Year*, London, 1928; Hermann Hesse, *Narcissus and Goldmund*, New York, 1968; and Albert Camus, *La Peste*, Paris, 1947. Other works could be added to this list, for example, Ingmar Bergman, *The Seventh Seal*, London, 1968.

plague for various reasons, but primarily to explore man's response to imminent death and to expose the frailty of human society. We can assume that the Black Death posed an intense personal dilemma for most Muslims. For medieval Muslim society as a whole, which is our main concern, the Black Death was a sharply focused and unavoidable stimulus that evoked defensive reactions in every sector of the community. These reactions provide us with material for the construction of a cross-section of communal relationships, economic interdependence, and cultural values and practices at one moment in time. This is not to imply that these aspects of Muslim life could not be studied individually or in a different manner. However, the plague pandemic offers a convenient, interesting, and effective method for studying some of the fundamental components of Muslim social organization and cohesiveness, as well as their adjustments to rapid change.[15]

In conclusion, I will attempt to assess the historical significance of the sustained demographic decline caused partly by the Black Death and recurrent plague epidemics in the Middle East. This assessment will be based both on the perceptible influence that depopulation exerted on the subsequent period of readjustment in Mamlūk Egypt and Syria, and on a comparison with the remarkable European Christian reaction to the same calamity.

[15] The Black Death in Europe has been recently analyzed in an attempt to judge the sources of and the limitations upon human society's ability to recover from a great catastrophe comparable to nuclear warfare (Jack Hirshleifer, *Disaster and Recovery: The Black Death in Western Europe*, RAND Corp., Santa Monica, 1966). The Black Death is similar to a nuclear explosion in its wide geographical extent, the abruptness of its onset, and the scale of casualties; however, the pandemic differs in its periodic recurrences and its non-destruction of material property. Earlier comparisons were drawn by historians between plague epidemics and conventional warfare; see, for example, James W. Thompson, "The Aftermath of the Black Death and the Aftermath of the Great War," *The American Journal of Sociology*, vol. 26 (1921), pp. 565-572, and G. G. Coulton, *The Black Death* (London, 1929), pp. 7, 74.

II

PLAGUE IN THE MIDDLE EAST

A. A HISTORY OF PLAGUE BEFORE THE BLACK DEATH[1]

Plague was well known to Middle Eastern peoples long before the Black Death; therefore, it was recognizable when it reappeared in the middle of the fourteenth century. Muslims of the fourteenth century could recall its macabre history, dating from the Muslim conquests of the Middle East in the seventh century. When plague ravaged the early Islamic Empire, the Muslims had responded to the danger; they sought both to explain it and to treat its victims. Subsequently, the early Muslim interpretations and social responses to plague gained authority with later generations when they were faced with plague epidemics. Thus, the initial encounters with it by the nascent Muslim community, which held special religious sanctity because of its association with the Prophet, came to determine the cultural attitudes and practices of traditional Muslim society. It is exactly this reliance on tradition that is so characteristic of medieval Islamic society and religion. In addition, the first historical pandemic of plague is comparable to the Black Death in its transmission, social and economic consequences, and cyclical reappearances. Its cyclical nature raises the medical and historical question of whether plague was endemic to the Middle East before the introduction of the Black Death in the mid-fourteenth century.

The origin of these early medieval recurrences of plague and

[1] For a fuller discussion of this topic, see "Ueber die grossen Seuchen," pp. 69-143; H.P.J. Renaud, "Les Maladies pestilentielles dans l'Orthodoxie Islamique," *Bulletin d'Institut d'Hygiène de Maroc*, vol. 3 (Rabat, 1934), pp. 5-16; and my "Plague in Early Islamic History," *JAOS*, vol. 94, no. 3 (1974), pp. 371-383.

of the Muslim traditions concerning the disease was the "Plague of Justinian," the first plague pandemic that can be fully documented in human history.[2] The Plague of Justinian derives its name from the fact that the pandemic spread throughout the Mediterranean world during the reign of the Byzantine Emperor Justinian (527-565). Beginning in 541 at Pelusium, an Egyptian port where the eastern effluent (the Pelusic channel) of the Nile entered the Mediterranean, plague moved westward to Alexandria and the rest of Egypt and eastward through Palestine and Syria. Evagrius Scholasticus describes a plague epidemic that appeared in Antioch, his home, in 542 and states that it had originated in Ethiopia.[3]

Evagrius may have been imitating the account of plague by Thucydides, who placed the origin of the famous "Athenian Plague" in Ethiopia. The precise origin of the Plague of

[2] Procopius, *History of the Wars*, ed. and trans. by H. B. Dewing, vol. 1 (New York, 1914), pp. 450-455. See also V. Seibel, *Die Grosse Pest zur Zeit Justinians* (Dillingen, 1857). The best modern introduction to the problem of the Plague of Justinian is J.-N. Biraben and J. Le Goff, "La Peste dans le haut moyen âge," *Annales*, vol. 24, part 6 (Paris, 1969), pp. 1484-1510, which attempts to outline the chronology and geographical distribution of the pandemic in Europe and the Middle East. Dr. Biraben has promised a more detailed study of plague in Byzantium and the Orient (*ibid.*, p. 1485, n. 1). Josiah Russell has also investigated the Plague of Justinian within the scope of his pioneering work on medieval demographic history; however, there is need for caution toward many of the author's hazardous assertions. At least for Middle Eastern demography, many statements are not based on primary sources for the period but rely heavily on very questionable comparisons with European population. (See Russell, "That Earlier Plague," *Demography*, vol. 5, part 1 [1968], pp. 174-184; also, "Late Ancient and Medieval Population," *Transactions of the American Philosophical Society*, Philadelphia, n.s., vol. 48, part 3 [1958]; "The Population of Medieval Egypt," *Journal of the American Research Center in Egypt*, vol. 5 [1966], pp. 69-82; "Recent Advances in Mediaeval Demography," *Speculum*, vol. 40 [1965], pp. 84-101; and *Population in Europe 500-1500* [London, 1969].)

[3] *The Ecclesiastical History*, book 4, section 29, ed. by J. Bider and L. Parmentier (London, 1898), pp. 177-179.

Justinian is uncertain, but it probably began in an endemic focus of plague in central or eastern Africa. Among the Arabic sources, the early medical compendium (235/850) of 'Alī ibn Rabban aṭ-Ṭabarī places the origin of plagues in the Sudan.[4] We know that plague epidemics since the sixteenth century have customarily been spread from East Africa through the Sudan by the caravan traffic to Egypt and North Africa. Beyond the Sudan, we have the testimony of the distinguished thirteenth-century Egyptian physician, Ibn an-Nafīs,[5] who identified the distinctive plague buboes with plague infection, in his influential commentary on Ibn Sīnā's famous medical encyclopaedia, *al-Qānūn fī ṭ-ṭibb*. More importantly, Ibn an-Nafīs mentions that he was told that plague often occurred in Ethiopia, where it was called *jaghalah*.[6] It appears, therefore, that it was endemic to Ethiopia during the early Middle Ages and that Ethiopia may have served initially as the center of transmission from Africa to the Mediterranean littoral by trade.[7]

There is no indication in the historical accounts, either oriental or occidental, that the Plague of Justinian originated in Central Asia, as it did in the two later pandemics.[8] Un-

[4] *Firdausu l-Ḥikmat or Paradise of Wisdom* (Berlin, 1928), p. 330.

[5] *EI*²: "Ibn an-Nafīs" (Meyerhof-Schacht).

[6] Quoted in *Kitāb aṭ-ṭibb*, fols. 145a-145b. Ibn Abī Hajalah states that this account was related to Ibn an-Nafīs by Shams ad-Dīn al-Ma'rūf, who had lived in Ethiopia. Also, the same story was related by Qutb ad-Dīn ash-Shirāzī in his commentary on the *Qānūn*; he was reported to have heard the account from Ibn an-Nafīs along with the symptoms of plague (see *GAL*, vol. 2, pp. 211-212).

[7] Sticker, *Abhandlungen*, vol. 1, pp. 25-26; see also Major Greenwood, *Epidemics and Crowd-Diseases* (London, 1935), p. 290; Wu Lien-Teh, "The Original Home of Plague," *Far Eastern Association of Tropical Medicine: Transactions of the Fifth Biennial Congress* (Singapore, 1923), ed. by A. L. Hoops and J. W. Scharff (London, 1924), pp. 288-291.

[8] Sticker, *Abhandlungen*, vol. 2, p. 87. The thorough investigation of Chinese sources for plague epidemics in the sixth and seventh centuries would be highly desirable.

accountably, Professor Russell and others have assumed an Asiatic source for the Plague of Justinian.[9] On the contrary, the Byzantine historian Theophylact Simocattes, who continued the history of Procopius for the reign of the Emperor Maurice (582-602), mentions an embassy of western Turks to the emperor in 598. In describing these people, Theophylact refers to Mogholistan, the Issyk Kul region, where we have the earliest evidence of the Black Death. Theophylact states that in the late sixth century, "The Turks boast about two very important things: they say that in this region they have never seen the occurrence of any contagious disease since the most ancient times and that earthquakes are rare."[10]

Wherever the Plague of Justinian may have originated, its description by Procopius is important because it is the first unequivocal account of a bubonic plague epidemic.[11] Procopius observed the distinct symptoms of plague when it ravaged the Byzantine capital of Constantinople. Plague had probably reached the city in the spring of 542, or possibly as early as the autumn of 541, engulfing the lands and peoples of the known world: the Byzantine Empire and the rest of Europe, Persia and the barbarian hinterland.[12] Asia Minor and Egypt particularly were reported to have suffered severely.[13]

[9] Russell, *Medieval Regions and Their Cities* (Bloomington, 1972), pp. 227-229.

[10] Quoted in Édouard Chavannes, *Documents sur les Tou-Kiue (Turcs) Occidentaux* (Paris, 1942), p. 248.

[11] A controversy exists over the determination of true plague epidemics before the Plague of Justinian, such as the Biblical "plagues" of the Philistines (1 Sam. 5 and 6), the "Athenian Plague" described by Thucydides, and the fragmentary evidence of bubonic plague in North Africa and the Levant recorded by Rufus of Ephesus, which was preserved by Oribasius. For a summary of the literature on this topic, see Hirst, pp. 6-10; Pollitzer, *Plague* (Geneva, 1954), pp. 11-13; George Sarton, *An Introduction to the History of Science* (Baltimore, 1927-1948), vol. 3, part 2, p. 1650; Sticker, *Abhandlungen*, vol. 1, pp. 17-23.

[12] *History of the Wars*, vol. 1, pp. 450-473. Other Western sources mention the dissemination of plague in the Orient (see Russell, "That Earlier Plague," p. 179, n. 37).

[13] Russell, "That Earlier Plague," p. 180; "Recent Advances in Mediaeval Demography," pp. 98-101; and "The Population of Medieval Egypt," p. 71.

The Plague of Justinian may have played a crucial role in the history of the early Middle Ages.[14] Although there is considerable uncertainty about the demographic history of this period, it is fairly certain that the pandemic contributed to the perceptible contraction of Mediterranean population. Professor Russell estimates that the initial plague epidemic of 541-544 reduced the European-Mediterranean population by 20-25 percent and that there was a total decline of about 50-60 percent of the pre-plague population for the period 541-700.[15]

Despite the slight investigation of the demographic data for the Plague of Justinian, there has been dramatic speculation that the pandemic and its recurrent epidemics were the solvents of classical Mediterranean civilization and were largely responsible for the formation of new political, social, and economic patterns characteristic of the European Middle Ages. According to such speculation, political power gradually shifted to the peoples of northern Europe, who were relatively unaffected by the epidemics, and, conversely, plague greatly weakened the Byzantine Empire. Justinian's plan for re-establishing the Roman Empire was wrecked, and the diminished Byzantine armies were unable to defend the extensive fron-

[14] Russell, *Population in Europe 500-1500*, pp. 20-21, and "That Earlier Plague," pp. 175-178; Biraben and Le Goff, "La Peste," p. 1499.

[15] "That Earlier Plague," p. 180. These estimates raise a number of questions about the nature of the pandemic itself. Russell's assertions are based on the assumption that the demographic effect of the Plague of Justinian and its recurrences are comparable to that of the Black Death and its subsequent epidemics in Europe. This is highly questionable because it is doubtful that the second pandemic was responsible for a continued decline in European population. Moreover, it has not been proved that the pneumonic form of plague was present in this first pandemic and its recurrences (see chap. II). In addition, there is the debated issue of whether or not commensal rodents played a significant part in the causation of bubonic plague in Europe during this first pandemic. It has been suggested that the plague rat (*Rattus rattus*) was not present in Europe before the twelfth century, when it was transported to Europe by the returning Crusader ships, and could not have served as the efficient vehicle of plague (Pollitzer, *Plague*, pp. 13, 283; M.A.C. Hinton, *Rats and Mice as Enemies of Mankind* [London, 1918], p. 4; cf. Christopher Morris, "The Plague in Britain," *The Historical Journal*, vol. 14, no. 1 [1971], pp. 213-214).

tiers. Hence, there was the successful resurgence of barbarian invasions—the Slavic migrations into the Balkans and Greece, the Lombardic invasion into Italy, and the Berber incursions into Byzantine North Africa. In addition, the pandemic may have had significant economic repercussions comparable to those of the Black Death eight centuries later. The Pirenne Thesis that the advent of Islam produced a rupture in the commerce of the ancient Mediterranean world has been seriously questioned; the discussion of this historical problem should also take into account the consequences of the concomitant drastic decline in Mediterranean population.

With regard to the Middle East, the Plague of Justinian may have sapped the military strength of the Byzantine and Persian Empires, already weakened by heavy losses sustained in warfare before the Arab conquests. Professor Russell suggests that an additional advantage was given to the nomadic and semi-nomadic peoples adjacent to these empires because the nomads suffered a lower mortality, as a result of an environment unfavorable to plague. Conditions were therefore optimal, in Professor Russell's opinion, for the migration of Arab tribesmen from Arabia and their successful conquests of the Middle East and North Africa.[16]

It is particularly significant, with a view to the Black Death, that the Plague of Justinian recurred in discernible cycles of about nine to twelve years, according to the occidental sources.[17] Most of the plague treatises written by Arabic authors after the Black Death include a history of these early recurrences in the Middle East because they struck the incipient Muslim community.[18] The short histories usually begin

[16] "That Earlier Plague," pp. 181-184, and "The Population of Medieval Egypt," p. 82; Biraben and Le Goff, "La Peste," pp. 1499, 1508.

[17] Biraben and Le Goff, "La Peste," p. 1493; Sticker, *Abhandlungen*, vol. 1, pp. 24-41.

[18] The early Muslim discussion and enumeration of plague epidemics is to be found in the *hadīth* literature and can be reconstructed from their citation in the plague treatises posterior to the Black Death. From this late medieval material it is clear that the earliest and most important history of plague epidemics and their related *hadīths* was

with the Old Testament "plagues" and include the enumeration of possible plague epidemics up to the time of the Black Death. The result of the compilation of the early accounts by the Muslim writers of the later Middle Ages gives us a fairly uniform chronology of plague epidemics in early Islamic history, in which the Black Death was considered to be the sixth major epidemic.[19]

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composed by al-Madā'inī (d. 225/840 or 231/845; see *EI*[1]: "al-Madā'inī" [C. Brockelmann]), who was an important Arab historian and a major source for the *History* of aṭ-Ṭabarī. Al-Madā'inī's work on plagues appears to be lost, along with most of his other compositions. Yet the majority of the later writers take their history of the early plagues in Islam from al-Madā'inī, for his work was incorporated into the writings of Ibn Abī d-Dunyā (d. 281/894; see *EI*[2]: "Ibn Abī d-Dunyā" [A. Dietrich]). The latter's *Kitāb al-i'tibār* (*GAL, Supplement*, vol. 1, p. 248, no. 41; I have been unable to locate a copy of this work) is the primary source for the plague treatise writers after the Black Death. Ibn Ḥajar also cites Ibn Abī d-Dunyā's *Kitāb at-tawā'īn* as the basis for a number of *ḥadīths* relating to plague (*Badhl*, fols. 86a, 120b-123b); the *Kitāb at-tawā'īn* is listed in *The Fihrist of al-Nadīm*, trans. by Bayard Dodge (New York, 1970), vol. 1, p. 185, but I have been unable to locate a copy of this treatise also. Another important source of *ḥadīths* was the great *Sunnī* polygraph, Ibn Qutaybah (d. 276/889; see *EI*[2]: "Ibn Ḳutayba" [G. Lecomte]), who discusses the difficulties arising from these traditions in his *Kitāb ta'wīl mukhtalif al-hadīth* (Cairo, A.H. 1326, pp. 125-126; French trans. by G. Lecomte, *Le Traité des divergences du hadīth d'Ibn Qutayba* [Damascus, 1962], p. 116). In his *Kitāb ma'ārif*, Ibn Qutaybah gives the history of plagues in early Islam (Cairo, 1960, pp. 601-602). All three early authors are quoted extensively in the treatises of Ibn Ḥajar and Ibn Abī Ḥajalah.

[19] The first full enumeration of epidemics, including plague, was written by Ibn Abī Hajalah in 764/1362 (*Daf' an-niqmah*, fols. 59b-76b). (Slightly earlier, a *Qasīdah fi ṭ-ṭā'ūn* by Bahā' ad-Dīn as-Subkī [d. 756/1355] mentions very briefly the plagues in early Islam [Dār al-Kutub al-Miṣrīyah MS no. 102 *majāmī' m*, fol. 198a]. Similarly, Ibn al-Wardī refers briefly to the early plagues in his *Risālat an-naba'*, p. 186.) The long historical account of Ibn Abī Hajalah was incorporated with modifications into the epilogue of Ibn Hajar's important treatise (*Badhl*, fols. 120b-131b). These two historical summaries of plague epidemics in early Islam—by Ibn Abī Ḥajalah and Ibn Hajar—were condensed by as-Suyūṭī (d. 910/1505) in his *Mā rawāhu l-wā'ūn*, pp. 144-156. As-Suyūṭī supplements this account with historical data from

The later chroniclers quote al-Madā'īnī to the effect that there were five great plagues in Islamic history before the Black Death.[20] The Muslim historians cite the "plague of Shīrawayh" as the first plague epidemic in the Muslim era. It occurred in 6/627-628 at Ctesiphon (Madā'in),[21] whose name is derived from Siroes (Kobad II), who succeeded Chosroes II in 628 as the Sassanian king of Persia.[22] Siroes himself died of plague in 629.[23] Comparing this epidemic to others, as-Suyūṭī quotes Ibn 'Asākir's history of Damascus about a "plague of Yezdigird,"[24] which must refer to a later appearance of plague during the reign of the last Sassanian king, Yezdigird II (634-642). Ibn Qutaybah does not mention

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other chronicles, which add little to the information found in the earlier histories, but he brings the list of plagues up to his own time. The compendium of as-Suyūtī forms the basis of Alfred von Kremer's important study of epidemics in an extensive introduction to his edition of the text ("Ueber die grossen Seuchen," pp. 69-143). See note 47 below.

[20] See *Mā rawāhu l-wā'ūn*, p. 144; *Badhl*, fol. 120b. Ibn Abī Ḥajalah also draws his information from al-Madā'inī and others but does not follow the same *five* plagues; he indiscriminately lists thirty "plagues" from early Islam to 749/1349 (*Daf' an-niqmah*, fols. 59b-76b). The determination of plague in Islamic history raises a difficult problem: Does the *sūrat al-fīl* (Qur'ān 105) refer to a plague outbreak? For a discussion of this point, see my "Plague in Early Islamic History," p. 375. See as well the discussion of Karl Opitz, *Die Medizin im Koran* (Stuttgart, 1906), pp. 43-44; Opitz points out that the description of a possible epidemic in this case, which he believes was smallpox, is similar to the description in the Qur'ān of the destruction of Sodom (Qur'ān 15: 73-74; 11: 84; 51: 32-34).

[21] *Mā rawāhu l-wā'ūn*, p. 144; *Badhl*, fol. 120b; *Daf' an-niqmah*, fol. 61b.

[22] Ibn Qutaybah, *Kitāb al-ma'ārif*, p. 601, l. 5: "ṭā'ūn Shīrawayh ibn Kisrā bil-'Irāq."

[23] At this time there is a brief mention in the Chinese sources of a "plague" in Hami (Camul), an important city on the famous Silk Route. The epidemic is recorded in Stanislas Julien, "Documents historiques sur les Tou-Kioue (Turcs), extraits du Pien-i-tien, et traduits du Chinois," *JA*, series 6, vol. 4 (1864), p. 231.

[24] *Mā rawāhu l-wā'ūn*, p. 144.

the plague of Yezdigird, but merely says that there was a long period between the plague of Shīrawayh and the "Syrian plague."[25] The plague of Yezdigird may simply be another name for the important epidemic in Syria.

The epidemic in Syria is known as the "plague of 'Amwās (or 'Amawās)"[26] because it struck severely the Arab army at 'Amwās, ancient Emmaus, in 17/638 or 18/639.[27] It is probable that as-Suyūṭī's suggestion that plague reappeared soon after its initial outbreak accounts for the two dates. Accordingly, Sayf ibn 'Umar related that the plague of 'Amwās occurred twice: it struck in Muḥarram and Ṣafar, disappeared, and returned again, and "many people died in it to the advantage of the enemy [the Byzantines]."[28] The historical accounts of the plague of 'Amwās state that about 25,000 Muslim soldiers died and that plague spread to the rest of Syria, as well as to

[25] *Kitāb al-maʿārif*, p. 201.

[26] See the discussion of the name and etymology of "'Amwās" in *Badhl*, fols. 61b-62b.

[27] at-Ṭabarī, *Taʾrīḫ*, Cairo ed. (1960-1969), vol. 3, p. 613, vol. 4, pp. 57-65, 96-97, 101; de Goeje ed. (Leiden, 1879-1901), series 1, vol. 5, pp. 2412, 2511-2521, 2570-2572, 2578. See also William Muir, *The Caliphate: Its Rise, Decline and Fall* (Beirut, 1963), pp. 164-167, based almost exclusively on the account of aṭ-Ṭabarī; *Mā rawāhu l-wāʿūn*, p. 144; *al-Bidāyah*, vol. 1, pp. 78-79; Ibn ʿAsākir, *Taʾrīḫ madīnat Dimashq* (Damascus, 1951-1963), vol. 1, pp. 554-555; and *EI*²: "'Amwās" (J. Sourdel-Thomine) for further bibliographical references. As for the dating, Ibn Ḥajar (*Badhl*, fol. 62a) reports both 17 and 18 A.H. for the epidemic but prefers 17 A.H.; Leone Caetani places the plague of 'Amwās in A.H. 18 (*Annali dell'Islām*, vol. 4 [Milan, 1911], pp. 4-6). Biraben and Le Goff refer to nearly contemporary plague epidemics in the West ("La Peste," p. 1497).

[28] *Mā rawāhu l-wāʿūn*, p. 145. Whether in 17 or in 18 A.H., this would have been in the months of January and February, and would suggest the probability of pneumonic plague. Another possible reference to pneumonic plague, in addition to bubonic plague, is made in A. E. Belyaev, *Arabs, Islam and the Arab Caliphate* (New York, 1969), p. 160. C. S. Bartsocas cites Byzantine sources for plague recurrences in 716-717 as well as for 695, 775, 1031, and 1056 ("Two Fourteenth Century Greek Descriptions of the 'Black Death,'" *Journal of the History of Medicine and Allied Sciences*, vol. 21, no. 4 [1966], p. 394).

Iraq and Egypt. The epidemic had been preceded by a severe famine in Syria-Palestine that may have predisposed the population to the disease. Famine is often associated with the appearance of plague epidemics, possibly as a result of lowered human resistance and the attraction of food reserves in human settlements, which brought the plague-infested rats into closer contact with men.

The Caliph 'Umar summoned Abū 'Ubaydah, the military commander in Syria, from 'Amwās to Medina in order to prevent his death from the plague epidemic in 18/639. Knowing Abū 'Ubaydah's courage and his loyalty to the army, the Caliph concealed his purpose and ordered him to return on an urgent matter. Abū 'Ubaydah realized the Caliph's intention and refused, preferring to stay with his army in Syria.[29] Therefore, the Caliph 'Umar set out for Syria and came to Sargh, where he met Abū 'Ubaydah and called a council of the military leaders. The council was divided on the issue and disagreed about what was to be done with regard to the plague epidemic. Finally, 'Umar accepted the advice of the leaders of the tribe of Quraysh (the tribe of the Prophet), to quit the region of the epidemic. Referring to the prohibition of the Prophet against a Muslim's either entering or fleeing a plague-stricken land, Abū 'Ubaydah protested that they were fleeing the decree of God. Not wishing to disagree with his military commander, 'Umar wisely replied with a parable: "Suppose that you come to a valley where one side is green with pasture and the other is bare and barren; whichever side you let loose your camels, it would be the will of God. But you would choose the side that was green."[30] According to another

[29] For the contents of the letters between Abū 'Ubaydah and 'Umar, see at-Tabarī, *Ta'rīkh*, Cairo ed., vol. 4, p. 61, de Goeje ed., vol. 5, pp. 2517-2518; *Badhl*, fols. 67b-72a, 79a-81b; and Muir, *The Caliphate*, pp. 164-167.

[30] *Badhl*, fols. 63a-77b; Muir, *The Caliphate*, p. 166, n. 1. There is considerable contradiction and ambiguity in the *ḥadīth* literature concerning the issue of flight from plague epidemics. The contradictions are clearly presented in Ibn Qutaybah's early discussion of contagion and plague; see his *Kitāb ta'wīl*, pp. 123-126 (Lecomte, trans., *Le Traité des divergences*, pp. 114-116 with a useful introduction, pp. xix-xxv).