beliefs and air of missionary zeal. Yet this is a disappoint-
ing study not only for the skeptical but also for the most
optimistic of archaeologists. Were it actually possible to
apply “microarchaeology” (and that remains to be seen),
the results would probably be so banal and boring as to
make it the driest dust that blows.

Mike Parker Pearson

DEPARTMENT OF ARCHAEOLOGY AND PREHISTORY
NORTHGATE HOUSE
UNIVERSITY OF SHEFFIELD
SHEFFIELD, S1 4ET
UNITED KINGDOM
M.PARKER-PEARSON@SHEFFIELD.AC.UK

EMERGING PATHOGENS. ARCHAEOLOGY, ECOLOGY
AND EVOLUTION OF INFECTIOUS DISEASE, edited by C. Greenblatt and M. Spigelman. Pp. xiv + 250,
figs. 41, tables 14. Oxford University Press, Oxford

The emergence, and re-emergence, of infectious dis-
case confronts humans in both developing and devel-
oped countries today with factors such as poverty, lack of
(and access to) health-care facilities, drug resistance, and
movement of people looking for better lives featuring
highly in the increases in infectious disease. These facts
in mind make this book timely. As the preface illustrates,
the focus is on the study of ancient pathogenic DNA to
diagnose disease; this type of research was lacking until
recently. While this author does not believe that aDNA
analysis can answer all our questions about infections in
the past, it has made considerable advances in some areas
in our understanding of the evolution of disease.

I would also challenge the opinion that DNA analyses
confirm diagnoses made morphologically. A positive DNA
result cannot be directly correlated with bone changes
being observed; it may make the diagnosis more likely
but does not prove a direct association. Does this mean
that biomolecular archaeologists will only accept a dis-
case diagnosis if they have a positive result using aDNA
analysis? One would hope not! In any case, the cost and
destructive nature of aDNA analysis prohibits whole pop-
ulation studies, which would be necessary to generate real
rates of disease prevalence. ADNA analysis will continue
to complement morphological studies where appropriate,
perhaps when a number of differential diagnoses are being
considered. It is imperative, however, to emphasize that
contamination of human tissue samples with foreign DNA
during burial, excavation, processing of human mate-
rial, and curation in museums), the strong possibility that
DNA will not survive to be analyzed, and the fact that
authentication of results is not always done in an inde-
pendent laboratory are all problems that still face aDNA
analysis. Furthermore, readers of this type of research
should, therefore, be cautious in accepting all published
results. As part of a recent doctoral thesis (Chilvers, “An-
cient DNA and Palaeopathology: Malaria in Ancient
Greece” [Ph.D. diss., University of Manchester, 2004]),
a survey of the potential authenticity of published patho-
genic DNA papers found that in 39 papers published on
DNA and disease diagnosis between 1994 and 2003, 32
did not discuss whether results had been independently
replicated, 2 said they had not, and the remaining 5 said
that they had been replicated. This aside, this book makes
for interesting reading.

The book is divided into three parts (evolution and
ecology, different aspects of human disease, and the state
of the art). Greenblatt provides an overview of how in-
festation originated and evolved into a disease, emphasizing
quite rightly that the “context of disease . . . can
hardly be ignored.” Martin considers the earth’s history,
disease, and primate evolution. While this overview chap-
ter is useful, one could challenge the acceptance of
“syphilis in a Pleistocene bear” and the statement that
there is little evidence of pre-Columbian syphilis outside
of the New World. A conference in France (Dutour et al.,
The Origin of Syphilis in Europe, Before or after 1493? [Toulon
1993]) proved there was much more evidence for pre-
Columbian syphilis in Europe than has been believed,
and additional evidence has more recently emerged (e.g.,
Mitchell, “Pre-Columbian Treponemal Disease from 14th
Century AD Safed, Israel,” American Journal of Physical
Anthropology 121 [2003] 117–24). The discussions on the
evolution of tuberculosis would also have benefited from
a consideration of the work by Brosch et al. (“A New
Evolutionary Scenario for the Mycobacterium tuberculosis
Complex,” Proceedings of the National Academy of Sciences,
USA 99 [2002] 3684–9) concerning the lack of evidence
for Mycobacterium tuberculosis evolving from M. bovis.
Gortz and Michel look at the potential for new pathogens oc-
curring in protozoa. Protozoa are hosts and/or vectors
and they feed on microorganisms, especially bacteria, a
good example being Legionnaires’ disease. Cano consid-
ers the potential of using fossilized evidence from amber
as an indicator of evolutionary change in species, and Black
charts the evolution of arthropod disease vectors (e.g., in
the case of malaria, where the mosquito carries the para-
site to infect human populations).

Part 2 starts with a chapter by Baum and Bar-Gal on the
diversity of human pathogens and coevolution of hu-
mans with their pathogens. This chapter is fascinating,
particularly for its discussion of the human HIV1 and
HIV2 infections and their close relationship to simian
immunodeficiency viruses in chimpanzees and the sooty
mangabey monkey, respectively. Unfortunately, DNA
analysis is often presented as the answer to all our ques-
tions about infections. I would also argue that the intro-
duction of large-scale medical treatments is probably not
the most significant factor affecting the development of
human disease. It may be one of the factors, but poverty
is very much involved with the occurrence of disease.
However, I would agree that understanding the evolu-
tion of pathogens is key to dealing with the future, and
DNA analysis could help trace the evolution of organ-
isms, as has already been done by Zink et al. (“Molecular
Characterisation of Mycobacterium Tuberculosis Complex
in Ancient Egyptian Mummies,” International Journal of

Cohen and Crane-Kramer discuss the subject of
palaeoepidemiology. This is a very useful review of the
subject, particularly with respect to primate and pre-human zoonoses (diseases in animals that are transmitted to humans, like tuberculosis). I would, however, challenge their optimism for DNA analysis—virtually all attempts to isolate the DNA of the treponemal organisms have been unsuccessful to date. Comments about the earliest cases of leprosy being datable to the Medieval period can also be countered with evidence from Egypt dated to the second century A.D. and from Britain in the fourth century (see Roberts et al., eds., The Past and Present of Leprosy [Oxford 2002]). Ubelaker emphasizes the need to improve methods of palaeopathological analysis and interpretation of the data, including the provision of training. His research on Ecuadorian skeletal remains serves to remind us of the need to take a population- and biocultural-based approach.

Rothschild’s paper concentrates on infections although there are no clear aims stated. Reactive arthritis, treponemal disease, and tuberculosis are considered. There are some odd statements (e.g., linear enamel hypoplasias reduce the likelihood of tooth survival, and [see above] there is no evidence of pre-Columbian syphilis in England). He suggests, based on his diagnostic criteria, that between one-fifth and one-third of skeletons from English medieval sites he studied suffered yaws. However, I am unclear how this conclusion was reached when periosteal reaction on the bones of the skeleton can be attributed to many causative factors; there is no mention of the facial changes of yaws or characteristic joint damage. I believe it is highly unlikely that this is a case for yaws, since yaws is a tropical disease and Britain has never had a tropical environment (unless all these people were immigrants). Finally, with respect to my research on the cause of rib periostitis, there is no hard scientific data that unequivocally could use rib lesions to support a diagnosis of tuberculosis (see Roberts and Buikstra, The Bioarchaeology of Tuberculosis [Gainesville 2003]).

Ewald’s paper concludes this section and considers the evolution of virulence and the scope of infectious causation. It is concise and well argue, and is a valuable contribution to our understanding of virulence of infections in the past.

Part 3 covers some of the latest biomolecular research on ancient disease, including an important paper by Matheson and Brian that attempts to develop a molecular taphonomic framework. It is unfortunate that this type of research was not undertaken in the early years of ancient DNA analysis, so that we could have been aware of when and where ancient biomolecules survive before so much time and money were wasted on samples that provided no results. Herrmann and Hummel provide a short overview of DNA analysis of ancient disease with a useful table of studies, although again there is no clear aim stated in the introduction to the paper.

Dutour et al. consider mortality rates and the occurrence of plague and tuberculosis in 16th- to 18th-century A.D. French skeletal samples, and feel that DNA analysis holds great promise for the future. Nataro et al. look at the (rare) study of the archaeology of enteric infections. Spigelman and Donoghue present data from research on Hungarian mummies and found fascinating results. For example, three tuberculous victims, a mother and her two daughters, had different strains of M. tuberculosis, showing that the molecular characteristics of past strains of organisms can be studied, and even compared with modern strains, to understand their evolution. Finally in this section, we have a summary of the now famous research on the 1918 “Spanish” influenza virus from Taubenberger and Reid. Of course, viral infections can only mainly be identified in the past by using biomolecular techniques since these infections do not directly affect the skeleton.

The book is well written and is accessible to a wide range of readers. It will be of interest to anthropologists, archaeologists, palaeopathologists, medical historians, biomolecular scientists, and medical scientists, including undergraduate and graduate students. At times statements of fact made in some papers are not supported by references where they should be, and I was unhappy to still see the use of “man” and “mankind” in one paper where “humans” and “humankind” would have been more acceptable. However, this does not detract from the book, which is otherwise an enjoyable read. Nevertheless, while it must be regarded as innovative in its approach, we must not run before we can walk: there is yet no need to replace basic palaeopathological analyses with DNA analysis.

Charlotte Roberts
DEPARTMENT OF ARCHAEOLOGY
UNIVERSITY OF DURHAM
SOUTH ROAD
DURHAM DH1 3LE
UNITED KINGDOM
C.A.ROBERTS@DURHAM.AC.UK


These highly detailed black-and-white comic books are the first two installments of the seven-volume series that retells the Trojan War epic cycle. The hardback editions recount many of the stories in the Iliad. Bibliographies, genealogies, and glossaries complement both issues.

The first volume involves the Judgment of Paris and the gathering of the Achaeans kings. In summary, Paris is a petulant rube that Priam sends to return Hesione from Salamis in Cyprus. Paris changes plans instead for Sparta, where he abducts Helen. Without explicitly including the gods, the premise for the war is set. Shanower then interwines several stories before arriving at Aulis. The narrative turns to Mount Pelion, where Theseus takes Achilles from Cheiron to be raised as a girl by Lykomedes of Skyros, where he later rapes the king’s daughter Deidamia. Meanwhile, Menelaus approaches Agamemnon to remind him of the suitors’ pledge at his marriage to
Many ancient diseases with a long history of afflicting mankind such as Tuberculosis and Malaria are now re-emerging. This book focuses on ancient diseases in order to bridge the gap that has for so long separated today's infectious disease specialists and the paleopathologists who describe pathology in skeletal and mummified remains. Linking these two research communities, and incorporating the views of anthropologists, medical ecologists and molecular/evolutionary biologists, will hopefully promote a better understanding of this complex but vitally important field.
