

Landscapes of Disease: Malaria in Modern Greece. By Katerina Gardikas. Budapest and New York: Central European University Press, 2018. 348 pp.

In a time of ecological crisis, it is high time for historians to start writing histories that present how changes in the landscapes, social hierarchies, and state power cause and hasten or slow the spread of disease. It is similarly important to leave room in historical narratives for the needs and adaptation capacity of non-human species, even if these species are perceived as enemies of humans. Katerina Gardikas has the background knowledge to undertake such a venture alone. She has been active in medical history for decades, mostly publishing in Greek, but she has also published articles in English in the *Journal of Contemporary History* and in several collections of studies. She is a historian by training who has retired as associate professor in History and Archeology at the National and Kapodistrian University of Athens, one of the largest universities of Europe.

The history of the effects of malaria on human beings and human society is a complex narrative of how humans, Plasmodia (a group of unicellular eukaryotes living as parasites), and various mosquito species have interacted. The statement, “it is safe to infer that that the association between frequencies of β -thalassemia and of malaria are non-random” (p.74) manifests and underlines the importance of the approach Gardikas has adopted. The statistical non-randomness that Gardikas has found means that the frequency of malaria is such a deep structure in the past of human populations in the territory of Greece that it impacted the genetic outlook of humans. *Landscapes of Disease*, thus, is a narrative that presents nature and culture as intertwined and inseparable.

The first chapter provides the backdrop for the Gardikas’s approach, as it presents the state-of-the-art and history of the research on the evolution and life cycle of the two types of Plasmodium that are most relevant and deadly in the Mediterranean region, vivax and falciparum.

The three chapters that follow focus on geographical differences, social and military history, and cultural history, respectively. In fact, all aspects are present in each part. The chapters are distinguished more by the writing strategies used in them.

The nearly book-long second chapter consists of seven case studies which describe different geographical patterns during the modern era. Gardikas partially borrows her understanding of landscape from another Greek historian, George Dertilis, though her definition is one that should be kept in mind:

“landscapes are understood not merely in a physical sense but also as a ‘human-environmental interactive sphere, transforming over time’ ”; landscapes are shaped both conceptually and ecologically by the cultural interaction among humans and by evolutionary transformations that also involve other species, and constitute places upon which past events have been described, sometimes subtly, on the land” (p.47) These cases are based on early twentieth-century surveys for which local medical doctors provided information. Gardikas included places that have been notorious for the relatively high incidence of malaria for millennia and that were also sites where land reclamation and drainage were extensive in modern times, along with a newly colonized hilly area and a town. Gardikas stresses that averages often mask high local incidence of malaria, and that even general rules, such as elevation, do not always mean that the malaria situation is easy to control. Alternation between drought and rainy weather also had different impacts, depending on vectors such as species present and wind. Her sensitivity to the importance of human ecological nuance comes to the fore as she explains how dry weather, which has traditionally been considered healthier than wet periods, becomes conducive to the spread of malaria once flocks of sheep create dust that brings vector mosquitoes to sites that otherwise would have been out of reach for them. In fact, Gardikas’s key finding is the omnipresence of instability and her observation that we need to do away with the blanket approach to malaria and its history.

The chapter on the impact of social aspects, such as urban-rural relations, the presence of a military, and the agrarian economy, is just as extensively researched as the one on topography. In this part, the descriptions which Gardikas cites on the extent and persistence of human suffering caused by malaria are striking. “Kardamitis counted about 200–300 *Anopheles* [mosquitos – the reviewer] on average in merely one corner in each of the newly constructed houses and estimated that each home contained more than 2,000 *Anopheles*... He then examined spleens and blood plates on his portable microscope and found mixed infections of all three types of malaria parasites in all fifty of the cases examined.” (p.154) The third chapter examines the contradictory situation in which, on the one hand, institutions and facets of the modern state in Greece provide far more information and opportunity for the study of local malaria patterns in a historical perspective, while on the other, the post-independence state failed to tackle malaria throughout the nineteenth century. This was partially due to the reliance on medicine instead of anti-mosquito measures. Dramatic political failures and warfare turned the ongoing crisis into disaster. This happened due

to the presence of British and French armies during World War I and to an even larger extent in World War II. Yet the presence of medical personnel and the increased availability of medicine had a positive influence in certain localities. The late wartime and post-war efforts that the UNRRA relief agency initiated were important steps forward, even if this primarily meant the application of DDT.

The fourth chapter discusses the cultural history of medicine, including the distribution and administration of quinine in the nineteenth century. Gardikas asserts that “Patients’ inclination to seek medical attention may be associated with the degree of medicalization and the social construction of their own physical condition and that of their children.” (p.273) She stresses that the cultural and social history of malaria in the nineteenth century malaria is inseparable from the history of the gradual shift from miasmatic to germ theory in medical science. Although Gardikas is interested in finding out if regular quinine intake reduced β -thalassemia or sickle-cell anemia, which are forms of genetic resistance to malaria, she could not reach a definitive answer to this question, though she is inclined to say that it did.

As far as shortcomings are concerned, the number of cases and examples overshadows the contours of arguments in the two longer chapters. The reader would feel less overwhelmed if subchapters were indicated in the table of contents. However, *Landscapes of Disease* is an important step towards an approach to the study of history that takes other species and the physical environment into account. Gardikas is as confident with factors influencing vector species and Plasmodia types as she is with localities, surveyors, and data sets. In the last chapter, for instance, the focus on the social and geographical distribution and global circulation of quinine, coupled with a clear understanding of the role of medical doctors and other actor-networks in the process, offers ample proof of her ability to bridge social history, the history of medicine, and the history of commodities. The book is a fine contribution to the History of Medicine series of CEU Press.

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